THE GENESEE FARMER.

Vol. XVIII, Second Series. ROCHESTER, N. Y., OCTOBER, 1857. No. 10.

HOW CAN WE MOST ECONOMICALLY INCREASE THE FERTILITY OF THE SOIL?

It is high time this question was asked by every land-owner. In many sections of the country it is beginning to force itself on public attention. It is the great problem which American farmers have to solve. This is a new country. Our climate and circumstances are very different from those of Europe. We have comparatively little experience of our own to guide us, and cannot safely adopt practices which rest simply on the experience of European farmers. We must develope a system of agriculture adapted to our own peculiar circumstances. To do this we require more *science* than the farmers of any other country. European farmers have the recorded and traditionary experience of centuries to guide them. Less than half a century ago, the soil, where we now write, was covered with primeval forests. The chief aim of the farmer has been to clear the land, and, without regard to permanent fertility, to get from it with as little expense as possible such crops as would furnish the greatest amount of ready cash. He has drawn heavily on the natural fertility of the soil. We do not blame him for so doing. It was doubtless the best thing that could be done under the circumstances. But now things are changed. The first flush of fertilizing matter in the soil has been abstracted. The same cultivation will not produce as good crops as formerly. *We must find means to enrich the soil.* Our experience on this point is limited. We know that manure will enrich it, but which is the most economical way of making manure we know not. We mean by this that we do not know what crops we ought to grow for the purpose of plowing under, or for feeding to animals on the farm. We possess certain information in regard to the value of manure made from this or that particular kind of food, but we do not know what food can be grown with least injury to the soil. In other words, we do not know what plants used as food for animals remove from the soil the least quantity of those substances most required for the growth of wheat and other plants used as food for man. Without this knowledge it is impossible to adopt the best system of rotation of crops. On this point we are entirely dependent on European experience. In England we know that turnips, clover, peas, beans and vetches impoverish the soil but little, and are the best crops that can be raised for feeding on the farm. But who can tell us what crops are best for similar purposes in this country? The first rational *attempt* to institute experiments that shall throw light on this subject has yet to be made on the American Continent. Till we have a series of experiments, scientifically designed and carefully executed, we must grope our way in the darkness of ignorance, with what little aid we can get from the fitful and uncertain light of accidental and undefined experience.

To answer the question at the head of this article, in the present state of agricultural science in this country, is impossible. If it were true that the manurial requirements of plants were indicated by their chemical composition, there would be little difficulty in deducing a rational system of rotation and manuring; but this is not the case. The experiments of Lawes demonstrate that all conclusions in regard to the substances best adapted for the growth of plants drawn from their composition, are at best uncertain. Peas and beans contain three times as much nitrogen as wheat, and yet it has been demonstrated that beans and peas require for their maximum growth far less nitrogen than wheat. The ash of wheat contains five times as much phosphoric acid as the ash of turnips, and yet we know that a soil must be richer in available phosphoric acid for the maximum growth of turnips than for wheat. The only way, therefore, in which we can ascertain the relative proportion in which the elements of plants should exist in a soil to render it the most productive for the different kinds of crops, is by actual experiment. We can hope to make little advance in this direction, till we can have a properly conducted "experimental farm."

Our comparative ignorance in regard to the best systems of rotation and manuring, however, is no excuse for the unskilful processes of agriculture practiced by so many farmers. It would seem useless to desire more knowledge, when so few avail themselves of that within their reach. We know quite well that the best system of rotation, of tillage and of manuring, will not enable a soil saturated with stagnant water to produce good crops. Until such land is underdrained, it is vain to expect an adequate compensation for the expense incurred in applying manures. It would also seem useless to point out the means of increasing the quantity and value of manure, when so many farmers allow the little manure they make at present to run so shamefully to waste. But such farmers are not readers of the agricultural papers, and the remarks which we have to offer are intended for that enterprising and intelligent class of farmers who avail themselves of every means of in-

creasing the fertility of their soil, but are unable to make it as productive as is desirable.

In the majority of cases, underdraining is the first step to be taken in all attempts at increasing the fertility of the soil. It will do more for American agriculture than it has for that of Great Britain. Our rains are heavier and more prolonged, and our droughts longer and more intense. Underdraining carries off the water when it is in excess, and increases the supply when it is deficient. Where land is not worth more than $10 per acre, it may not be profitable to expend from $20 to $30 per acre in underdraining; but where land that needs underdraining is worth $50 per acre, nothing can be more profitable. Underdraining is a permanent investment. It frequently doubles the crops. The soil can be plowed earlier in the spring and later in the fall. Underdraining increases the temperature of the soil, and crops mature much earlier. *The entire increase of the crops is net profit.* In other words, if it costs $10 per acre to raise a crop of wheat on undrained soil, and the crop sells for $15, there will be $5 per acre profit; while on the underdrained acre, if the crop sells for $30, there will be $20 profit. The crop is only doubled, while the *profit* is quadrupled.

To increase the quantity and quality of the manure should be the next object. The mineral matter in a ton of ordinary barn-yard manure can be purchased in the form of ashes, plaster and bone-dust, for less than 15 cents; and the carbonaceous matter can be obtained in the form of peat, muck, &c., for 5 cents. All the substances in a ton of manure, therefore, *except the ten pounds of ammonia that it contains*, can be purchased for 20 cents. If manure is worth a dollar a ton, the 10 lbs. of ammonia is worth 80 cents, or *four* times as much as all the other ingredients of the manure. We may add that there is no artificial source of ammonia from which it can be obtained for less than 12 cents per lb. In making manure, therefore, the great object is to get ammonia. The atmosphere and rain water contain it, and plants can obtain it from these sources. Some plants can obtain more than others. Other things being equal, we should grow those plants which obtain the most from these natural sources. It has been ascertained by experiment, that clover, peas, beans, vetches and lupins, obtain a considerable quantity of ammonia from the air, rain, dews, &c., while wheat, barley, and probably other similar plants, do not. The more we can grow of the former and the less of the latter, the richer will our soil become, provided they are consumed on the farm by animals, and the manure returned to the land.

The more ammonia a manure contains, the more valuable will it be. The quantity of ammonia in a manure bears a constant proportion to the nitrogen (ammonia) in the food consumed by the animals. Other things being equal, therefore, we should not only grow those plants which obtain the most ammonia from the atmosphere, but should feed out on the farm those foods which, other things being equal, contain the most nitrogen (ammonia.) Among these, peas, beans and oil cake hold the first rank. Either of these foods contain nearly three times as much nitrogen as barley, oats, rye, &c., and the manure made from their consumption would be nearly three times as valuable. Clover hay contains twice as much nitrogen as timothy hay; pea and bean straw twice as much as wheat, barley, oat and rye straw, and the manure made from them would be correspondingly valuable.

Among the most economical means of increasing the fertility of the soil at present known, therefore, are underdraining, good tillage—which not only destroys weeds, but renders the inert matter of the soil available, and enables it to absorb more ammonia from the atmosphere; growing less wheat, barley, oats, rye, timothy grass, &c, and more clover, peas, beans, vetches, lupins, and other leguminous plants, as well as more turnips and other root crops; keeping more stock, and feeding them with the last named plants, and carefully preserving and applying the manure.

STUDY THE MECHANICAL QUALITIES OF THE SOIL.

While we can hardly be said to have paid *too much attention* to the simple *elements of plants* which a soil contains, we may safely aver that we have given far too little attention to the mechanical condition of the soil—to its power of absorbing moisture and fertilizing gases from the atmosphere, to its *retentive and capillary* powers, and to the quantity of water required to saturate it. Led away by the delusive fascinations of the "Mineral" and "Special" manure theories, we have neglected for the past ten or fifteen years to study these characteristics of soils; and, indeed, many writers at the present day appear to have forgotten that soils have any such qualities.

It is known that soils which contain much *humus* or decayed vegetable matter, have great power in drawing moisture from the air. Clay, too, possesses this power to a great extent, but it should be well pulverized in order to allow the air to permeate through it. Pure sand does not possess this power at all; and yet sandy soils which contain a little clay and humus, often suffer less from drouth than tenacious clays, owing doubtless to their permeability. Sir Humphrey Davis says: "The soils which are most efficient in supplying the plant with water, by atmospheric absorption, are those in which there is a due mixture of sand, finely divided clay, and carbonate of lime, with some animal or vegetable matter; and which are so loose and light as to be freely permeable to the atmosphere. With respect to this quality, carbonate of lime and animal and vegetable matter are of great use in soils; they give absorbent power to the soil without giving it tenacity. Sand, on the contrary, which also destroys tenacity, gives little absorbent power. I have compared the absorbent power of many soils with respect to atmospheric moisture, *and I have always found it greatest in the most fertile soils;* so that it affords one method of judging of the productiveness of land." There is a rich field open for investsgation in this direction, and we should be thankful for the experience of our readers.

The quantity of water required to thoroughly saturate the various earths, is a question of much importance. Schuebler found that a cubic foot, when thoroughly saturated, contained of water as follows:—Silicious sand, 27.3 lbs.; gypsum powder, 27.4; calcareous sand, 31.8; carbonate of lime 47.5; fine slaty marl, 35.6; pure grey clay, 43.3; stiff clay or brick earth, 45.4; garden mould, 48.4. The fact that "garden mould" imbibes more water than any

other soil, and the poor "silicious sand" the least, indicates that rich soils are less easily saturated than sterile ones. Is such the case?

The power of retaining water, when exposed to the atmosphere, is also known to differ materially in the several earths. SCHUBLER found, calculating the evaporation as from 100 grains of water contained in the earth, that 200 grains of earth, spread on a surface of ten square inches, at a temperature of 65¾°, evaporated in 4 hours as follows: Silicious sand, 88.4 grains; calcareous sand, 75.9; gypsum powder, 71.7; sandy clay, 52; loamy clay, 45.7; stiff clay or brick earth, 34.9; pure grey clay, 31.9; fine lime, 28; garden mould, 24.3; magnesia, 10.8.

Our space will not allow us to comment on these results, or to pursue the subject further at this time, but we would commend their study to every farmer, and especially to every farmer's son. Do not forget, moreover, to let us have the results of any observations which throw light on this subject.

ITEMS SUGGESTED BY THE SEPTEMBER NUMBER.

Our "dry spell" has come at last, and for two weeks we have had no rain. Fine for the oat harvest—for ripening our corn—for fall work generally. I have been too busy almost to *itemize* for the *Farmer*. But I must remark on some things perused therein.

The Royal Agricultural Fair—Would present to our republican eyes "a sight worth seeing." The symmetrical Short-horns, the handsome Herefords, the dainty Devons; it would be difficult to say which best pleased us; while the South Downs and Leicesters would make us ashamed of our muttonless and light-fleeced breeds. Yet American stock is rapidly improving; *we get the pick* of English herds and flocks, and shall soon be able to contest the palm.

Massachusetts Premium Butter.—The extracts given on this subject are particularly interesting to dairymen; they show, what we were well aware of before, that there are *different methods of making good butter*. "To *wash* or not to *wash* is not *the question*," but rather, sweet cream, careful churning and working, and good care in packing and keeping. Let every butter-maker do the best circumstances will admit, and there will be great improvement in the quality of this product.

Growth of the "Sorghum."—Six weeks has lifted the sugar cane about ten or twelve feet in the air; it has grown amazingly since warmer weather came, and is now headed out, with a prospect of nearly ripening.

Poor Roads.—The plan proposed by Mr. Houghton would improve our roads, could it be carried into effect. And it would be a capital plan to expend the road tax every year, in *finishing up* a portion of the road, instead of "spreading" it over the whole district, one-half of it to no purpose. Complete a road—a raised and well-gravelled road-way, with good drainage on each side, for a few rods every year, and at last, all our roads would be fit for use.

Application of Lime.—In applying lime to land, would it be best to put it on grass land one summer, to plow under the next season for corn or roots? Or, would you put it on plowed land, and harrow in before sowing to any grain crop? Practical limers, please answer.

Turnips among Corn.—Little chance would turnips have in our corn field—the ground entirely shaded, though the hills are three and one half feet apart each way. I am raising turnips after early potatoes, and peas, and hope to have something of a crop of them.

Great Fecundity of Wheat.—Wheat and other grains will yield enormously if they have the chance. If the saving in seed would pay for the increased labor, and the maturity of the crop was not delayed by tillering, it could readily be shown that one peck of seed is better than three bushels, per acre. But thin sowing gives room for weeds. These must be removed, or they will overpower the wheat, however great its fecundity. *The losses by weeds are enormous.*

Digging Potatoes.—When potatoes are affected by the rot, shall we dig them immediately or let them lie until the usual time? I think they rot no worse to remain in the hill until cool weather comes, but, of course, cannot be certain about it. I know I find no more rotten ones in a hill, than three weeks ago, when the disease fairly commenced its work; and it seems to me that handling and sorting while yet scarcely ripe, would injure more than it would save.

N. Y. Premium Butter.—Is made from *sour cream*, while the Massachusetts folks say only *sweet cream* will make the prize butter. "Who shall decide when doctors disagree?"

House Ripening Pears.—Our *Jargonelles* were picked and ripened in the house this year, and there is a *very marked* difference in their quality. They are tenderer, melting, more juicy, and better every way. Besides, we gathered them ourselves, instead of having them half carried off by fruit thieves, as usual.

Niagara Co., N. Y. B.

NOTES FOR THE MONTH.—BY S. W.

Transmutation of Wheat to Chess.—Great credit is due to that indefatigable rural economist, John J. Thomas, and his co-committee men from our State Agricultural Society, for their very thorough examination of those specimens of chess growing from wheat seed presented by S. Davidson, because a less careful testing would have given to error that ostensible triumph, which so often makes Nature appear inconsistent with herself. When this country was being cleared of its heavy continuous forests, I heard many farmers say that sowing plaster on a new clearing would invariably bring in white clover. As no white clover seed could have been scattered on such virgin soil, it would have been quite as much in accordance with Nature's laws to say that plaster was transmuted into clover, as that wheat was turned to chess.

Turnips and Tomatoes among Corn.—C. Brackett, of Fulton Co., North Indiana, grows turnips successfully among corn. That they do not grow pithy, must be owing to their slow growth and small size. Is Mr. B.'s a limestone or granite soil? If a limestone soil, and devoid of vegetable mould, methinks a crop of English turnips in the sunny climate of Indiana must be very uncertain. The best and largest tomatoes I have this season are seedlings that came up among early planted King Philip Corn. The corn was picked green, and the stalks up by the 5th of August. Last year it was fit to cut by the 20th July. Planted 10th May each year. Soil, rich calcareous clay. Mr. B. asks if a cow will eat toma-

toes? Certainly, and with as much relish as bipeds, men, women, and chickens.

That the coarse wild grass of the prairies makes as good flavored yellow butter as either the white or red clover, or June grass *(agrostis)* of the dairy regions of New York, perhaps even Mr. BRACKETT does not believe. More than one woman has written from the all fertile Kansas prairies that perfect butter cannot be made there.

INDIAN CORN AND SORGHUM.—Corn has improved much in the last three weeks. Although the long cool nights have been a great drawback to the unfilled ears, the prospect is now fair for a middling crop of corn.

Sorghum has triumphed over the spleen of its conservative enemies; and if it will ripen in this region, this cold wet season, it will in any other season. I measured stalks to-day twelve feet to the top of the seed panicle, which is now turning brown, this 9th September. The ratoons are not as tall as the main stalks, but they generally bear seed. The maximum thickness of the stalks is 1¼ inches in diameter, but when planted to stand less than six inches apart, in the four foot rows, an inch only is attained, and the suckers will be less. Thus far the juice is no sweeter than that of sweet corn stalks, but much more abundant. That planted tenth May, seeded a week earlier than that planted first June. A few transplants are now full size.

POTATOES.—There is a general complaint that the vines of late planted potatoes are prematurely dying, and the rot is increasing. I planted some Mexicans on a well manured sandy knoll, which are now so rotten that they are not worth digging. Blue Mercers are yet unripe, with dead vines. Inferior round potatoes escape the rot better.

MAKING AND SAVING MANURE.—Throw potato or pumpkin vines, or any other vegetable refuse, on the top of the ground, and it is soon lost in the air, its ashes excepted; but put them in the hog pen or a calf pen, and you soon have a quantity of manure that will make your back ache to throw out. It is said in Rhode Island, that every hog makes seven dollars worth of manure yearly; and yet who in Western New York ever heard a Western farmer deduct anything from the cost of an animal's keeping by giving credit for the manure it makes? On the drift formations at the East, where they have but little vegetable refuse to compost, a kind Providence has given to almost every detritus farm its swamp, the muck from which abounds in plant food, which to be made truly available, must be composted with the unfermented manure of the stable, or the still more nitrogenous fish or dead animals, by which means all the organic matter of the pile is held, by chemical affinity, ready for the use of growing plants. I asked a farmer, the other day, if he did not reflect that every load of distillery slop that he hauled home was worth more than three loads of fire-fanged stable manure? He replied that he had never thought of it before, but it "stood to reason." He, however, had noticed that the poorest knolls in his field, when slop was fed out, soon became black and muddy, and would hardly become dry in the hottest sun. Such is the invariable effect of nitrogen, particularly on those alluminous soils, which are so quick to dry up and bake when wet with water only. The scrapings from those ammoniated knolls would be the best of manure for wheat.

THE COMING STATE FAIR AT BUFFALO, 9 TO 12TH OCTOBER.—Great preparations are making at Buffalo, to accommodate the State Fair as its increased magnitude requires. The last State Fair at Buffalo was the best up to that date, and an earnest is now given that a greater display, or, as the French say, exposition, will be made there this year than ever. As liberal premiums are offered to all outsiders, Canada, Ohio, and the whole lake region will be well represented. S. W.

Waterloo, Sept. 10th, '57.

GOOD SHEEP THE MOST PROFITABLE.

MANY farmers when they want to purchase a flock of sheep, enquire of A. B. and C. who has sheep to sell.

"Well, JIM has a beautiful flock of sheep, and I heard him say that he would sell a few of them to a farmer that would improve them and give the result to his brother farmers through the medium of the *Genesee Farmer*."

"What price does JIM ask for them?"

"Five dollars per head."

"Outrageous! JIM has no conscience! I won't pay such a price for sheep anyhow."

"Well, JACK has some sheep to sell."

"What does *he* ask for his sheep?"

"One dollar per head."

"What kind of sheep are they?"

"Well, rather small, but they have been starved."

"Well, I'll go and see them; I can feed them up."

And, sure enough, there he comes, driving his little runts home, and carrying one of them in his arms.

Before spring one-half of them are dead, and the other half are so lean that they have no milk, and their lambs are starving. The foolish man hangs his head, and mutters "*rotten sheep.*"

Mr. LOOKOUT comes to JIM and says, "I'll give you 25 dollars for five of your best ewes, and promise to show the best pen of sheep at the next County Fair."

"You shall have them."

"How can I get them home? They are so fat that if I run them they will melt. I'll take them home in my sleigh. Don't catch them by the wool; it will injure the sheep. Take hold of the hind leg, and I will put my arm under her neck. Don't hurt her. Be cautious. Don't turn her over. Another and another is caught, with the same caution.

The winter is past, and the spring has come, and what a beautiful sight! Five large ewes and ten fat lambs.

"Mr. LOOKOUT, what will you take for your lambs?"

"Don't want to sell them, sir."

"Well, what are they worth?"

"Twenty dollars."

Shearing time has come.

"What amount of wool did your brag sheep shear?"

"Twenty pounds."

"What did you get for it?"

"Thirty cents per pound."

"A very good investment, Mr. LOOKOUT."

Brother farmers, I leave it with yourselves to decide who made the best purchase; Mr. LOOKOUT or his brother farmer. JIM.

"THE MANURE QUESTION."

Eds. Genesee Farmer:—The management and application of manures has been freely discussed in your pages—and very properly and profitably so, in my opinion. Perhaps the following may throw some light on one phase of the question:

In removing the contents of an earth-floored calf pen or stable, a few days ago, I found the manure which was made therein last winter and which had accumulated to some two feet in depth, *still unfermented and fresh*, and in its best condition for composting with swamp muck, or other refuse vegetable matter. The pen was kept level and well littered and become packed down hard, so that there was no chance for the admission of air—indeed the readiest method of getting it out was to cut it in chunks with an axe—hence fermentation and loss was impossible. I have piled this with an equal quantity of muck and intend to apply it to green-sward, the last of September, as a preparation for corn the next season. I have also spread some decomposed manure, already, for that purpose, as I am bound to try Mr. Johnston's method.

Now, I think this shows that manure can be kept without loss, as long as we design, for some treated in the same manner, two years ago, is scarcely changed. Let us then have plenty of shed room and remove thereto the stable manure, keeping the sheds at the same time well littered for the shelter of stock, which will tread it down solid, and prevent all loss. Then we can remove at any season most convenient. But I need not further remark in this connection.

J. H.

Niagara Co., N. Y.

BUTTER FROM PRAIRIE HAY.

Editors Genesee Farmer:—I take my pen to correct an idea advanced by your excellent correspondent "S. W.," in his *notes* for August. It is under the head "Prairie Hay and White Butter." Referring to a lady writing from Kansas, he says:—"The butter from prairie grass is white, aromaless, and in stinted supply at that. She advises her brother not to bring his Chautauque horses to Kansas, as they are too quick for the sloughy roads, and may not relish, much less thrive on, prairie hay." Now, I have resided in the West and on the prairies in Wisconsin or Minnesota for more than five years, where the tame grasses are not grown, and have had butter upon my table every day, and still have not found it "white, aromaless, or in stinted supply." I have eaten what was pronounced by good judges to be good butter in all of the New England States, in New York and in Pennsylvania, but have found the butter from prairie grass to be of as good *quality and color*. In the spring of 1856 I drove one cow from Eastern Wisconsin, turned her upon the prairie weak and poor, with two sucking calves, weak and poor from the effect of the drive and scanty feed while on the road. The calves run with the cow unmolested until August 16th, (when my family arrived) at which time I found them growing *rapidly* and in *good* condition. I then muzzled them, and made butter enough to supply my family (of from three to four grown persons) until she came in again in the spring. The calves did *well* all winter on prairie hay, and so did the cow. The same cow with another, both ordinary cows, have supplied my family (averaging five grown persons) with milk and butter since spring, besides keeping two calves (which we still feed with milk) in *good* condition, and furnishing most of the food for one hog, and some butter to sell, and some to put down for winter and spring. Cows that are not milked *regularly* of course do not do as well. Horses do *better* on *our* prairie grass, after the first year, than on the tame grasses; they never have the *heaves* here. I am giving *my own* experience. It may be different in Ossawatamie, as they have the *milk fever* in some portions of Illinois and Indiana; but it should not be inferred from that, that it is universal in prairie countries.

We have lately had much rainy weather. Wheat and oats are not all harvested, though *some* have been marketed at one dollar per bushel. Corn will be fit for harvesting in a few days. Potatoes, carrots, turnips, &c., growing rapidly. E. Hodges.

Marion, Olmsted Co., Minnesota, Aug. 17.

UNDERDRAINING.

It is time that underdraining was thought of more, talked of more, and practiced more than it is. The value of underdraining is almost unlimited. Land properly drained, will produce double crops. A drain is not like a load of manure; once placed in the earth it will last for ages, while manure must be applied every year or two; and besides that, manure is not half so valuable on undrained as it would be on properly drained land. And, besides getting more value for your manure when your land is drained, you save half your labor, because you can produce just the same amount of grain on half the number of acres.

The proper way of constructing a drain on land descending a little, is to dig a ditch 18 inches wide, and about two feet deep; then place stones four, five or six inches square against each side on the bottom of the ditch. Then lay flat stones across the top of these; then throw small stones on the top of the flat ones; then haul in your dirt, and your drain is completed. If you have no flat stones, round stones will answer, placed in the same way.

Duanesburgh, Schenectady Co., N. Y.

PRESERVING BUTTER.

Editors Genesee Farmer:—I see in the July No. a very sensible article on butter making, from the pen of H. H., of Rutland, N. Y. I was also much struck with a plan of preserving butter by boiling, as practiced in Switzerland, taken from a work of Dr. John Forbes, entitled a Physician's Holiday, or a Month in Switzerland. The *modus operandi* is as follows:

Into a clean copper pan (better, no doubt, lined,) put a quantity of butter. Place it over a very gentle fire, so that it may melt slowly, and let the heat be so graduated that the melted mass does not come to a boil in less than two hours. During all this time the butter must be frequently stirred, say once in five or ten minutes, so that the whole mass may be thoroughly intermixed, and the top and bottom change places from time to time; and when the melted mass boils, the fire is to be so regulated as to

keep the butter at a gentle boil for two hours more, the stirring being still continued, but not necessarily so frequently as before. The vessel is then to be removed from the fire and set aside to cool and settle, still gradually—this process of cooling being also supposed to require two hours. The melted mass is then, while still quite liquid, to be carefully poured into the crock or jar in which it is to be kept. In the process of cooling there is deposited a whitish, cheesy sediment, proportional to the quantity of butter, which is to be carefully prevented from intermixing with the preserved butter. These cheesy grounds are palatable and nutritious, and may be used as food.

It is said that butter so prepared will stand for years perfectly good, without any particular precaution being taken to keep it from the air. That it is good at the end of one year is a fact. What think you of the plan? J. F.

Liberty, Tioga Co., Pa.

REMARKS.—One hundred pounds of ordinary fresh butter contains:

Water	12 lbs
Curd or caseine	1 "
Pure oil	87 "
	100

Pure oil will keep fresh for any length of time. It is owing to the presence of water and curd that butter becomes rancid. Salt preserves butter, by saturating all the water—the less water it contains the less salt is required to preserve it. All that is necessary to render butter capable of being kept fresh for any length of time in a fresh condition, is to remove the water and curd. This can be done in the way stated by our correspondent. The butter must be boiled till all the water is driven off, which is marked by the cessation of violent ebulition. The caseine, like albumen, (white of egg) is coagulated by heat, and will, on cooling, settle at the bottom of the vessel; or it may be separated by straining it while hot through muslin.

Butter is often prepared in this way for use on ship-board. It is also the usual way of preserving it in India, where it is called ghee. Similar methods are also employed in many parts of the continent of Europe. The boiling, however, destroys much of the flavor of the butter.—EDS.

BREAKING PRAIRIE LAND IN THE FALL.

MESSRS. EDITORS:—"L. C. S." says, in the September number of the *Genesee Farmer*, that he has "never yet known any prairie breaking done before the middle of May, or later than the first of August." What does he mean by this? Does he mean that *because* he has never seen it done at other times, *ergo* it *should never* be done at other times? A strange doctrine; yet I would like to know what his "eighteen years' experience" has taught him. It has taught me (three years' experience) that *heavy, wet prairie* had much better be broken after vegetation has ceased in the fall. Then the frosts of winter pulverize it thoroughly, and make it a fit bed for seed to vegetate in the next spring, (of course after thorough drainage, for wet prairie is only fit for wild grass, and produces none of our cultivated grasses.

If not plowed in the fall, do so in early spring. Plant in corn, in rows eight feet apart, the stalks six inches in the row. Cultivate thoroughly with the harrow till the first of July. Then sow buckwheat between the rows, and you will have your sod thoroughly pulverized; or you can wait till the last week in August, and sow between rows with wheat or rye, and get a good crop, and the land in fine tilth for succeeding crops.

I cannot get a plow that breaks heavy prairie well, but hope to find one that will operate satisfactorily.

Rochester, Fulton Co., Ind. C. BRACKETT.

P. S.—In my letter on covered ditches, in the September number, I meant to convey the idea that it is better to leave the covered ditch a little concave, so that it might run off the surface water, if at any time the rain should be so abundant as to supersaturate the earth, thus preventing water from standing on the surface at all. C. B.

TAKE CARE OF YOUR TOOLS, FODDER, &c.

MESSRS. EDITORS:—The season of hard labor is past, and now comes the season of care. First and foremost, the tools that will be required no more this fall, should be oiled, (such as are of wood,) and laid by in some safe place until needed next spring. Scythes, harrows and such plows as will not be required for fall plowing should be housed secure from dampness, so as not to rust. Keep no more pitchforks around than are needed for convenience; the remainder should be laid by, and so with the rakes, as only one will be needed on the barn floor during the winter.

After the tools are disposed of, attend to your stock. See to it that your corn stalks are well taken care of, for I believe we shall need all the fodder for use next winter, that we have. There are strong reasons why we should use what we have with economy, and not join in, nor be deluded by, the cry of superabundance of fodder. True we have a good, average crop of hay, perhaps as much of straw, of the various kinds, as we had last year, but there is less corn stalks, besides being of an inferior quality to those of last year's growth; if from no other cause, many pieces are injured by the frost, which was the case with very few pieces last year. There is no old hay in the country to fall back upon in case of necessity, as there was last winter, and still we have the same amount of stock to feed. These are a few of many reasons why I would urge economy in feeding. Let there be nothing wasted, nor, as is too customary, leave the carrot and turnip tops to rot on the field. D.

Gates, N. Y.

ON THE MANAGEMENT OF YOUNG STOCK.

MESSRS. EDITORS:—The thought this evening struck me that I would give you my ideas on the management of young stock, commencing when we begin to fodder in the fall. I would say if you do not stable your young stock, (as but few in our section do) prepare sheds covered with slabs, if nothing else, to break off the cold winds, and hard storms. Do not at first, begin to feed straw, and coarse fodder; feed as good as you have, and when very cold weather comes, feed your coarse fodder once or twice a day. By this process your stock will be kept in good heart the forepart of winter, which is the very worst time in the year for them to get thin. If you commence about the 15th of February to

feed, say one quart of grain per head each day, there will be no money lost, for your stock will come out in a thriving condition in the spring, and when you see them ranging the field the first day of June, with their old coats entirely off, and their new ones glistening like a new Mexican dollar, you will feel yourself three-fold paid for the few shillings' worth of grain they have consumed.

Some people in this vicinity are in the habit of keeping their stock confined in a small yard, until grass gets a sufficient start for them to pick their living; then turn them out at once and feed them no more. This idea I do not support. The sudden change from hearty hay to fresh, flashy pasture, is too much for them; it is too physicing and weakening,—they will look for some time like a shadow by moonlight. I prefer giving them a large range from the time grass begins to start, and feed them hay as usual, and when it does them no good they will make it manifest by refusing to come and eat, when you carry it out.

Do not forget to salt your stock once every week. In my opinion that is often enough, and none too often. I think it a first rate plan to change from one pasture to another occasionally; once in three or four weeks is often enough, unless the feed gets too short to afford a sufficient supply for them.

W. B. Garratt.

Spencer, N. Y.

PLOWING IN GREEN CORN FOR MANURE.

To what means shall farmers resort for the cheapest and quickest means of keeping their farms in a high state of cultivation?

This is a subject in which every farmer should be interested, and one which should call out the experience of scientific and practical farmers. It is a lamentable fact, that most of our farms are deteriorating, and are growing poorer. The farmer who has one hundred and sixty acres of land under cultivation, is not able to manure more than fifteen or twenty acres each season with his barn-yard manure, and this is not enough to keep up the farm, with an occasional crop of clover plowed under as a green manure, unless it is permitted to lay over several years, which but few think they can afford to do.

The means to which I shall resort are these:—For winter crops I shall break the fallows early, say about the first of June or soon after, using the jointer plow, and harrow it down very smooth, and then drill two bushels of corn per acre, or sow two and one half broadcast, and harrow it in; but I should prefer to have it drilled, and then harrow afterwards if necessary. The drill covers almost every kernel.

After it has grown as large as can be plowed under, which I should judge will not be far from the first of September, or before, turn it under. I have a few acres which were drilled on the 24th of June last, which is now nearly as large as could be plowed under. It has now two months' growth, and would cut eight or ten tons to the acre, and will probably grow to several more, as it has just begun to tassel. Now, suppose such a body as this should be plowed under, what must be the result? It must certainly be worth as much as three or four crops of clover, and has many other advantages. It is grown in two or three months, and is very effectual in choking grasses and other obnoxious weeds. The expense of the seed is not very great at present, and when the sorghum is more generally cultivated, it may be used, and the expense will be very materially lessened.

Another advantage in this mode of manuring is, there is no carting to be done, which amounts to no small sum, especially where the distance is great. I have seen and heard of many who sow buckwheat, and plow it under, for manure, but if I am not very much mistaken, this plan would leave it entirely in the shade. I have mentioned this plan or mode of manuring to several farmers, who entirely agree with me that this will supersede any other green crop as a manure.

It may be that this plan has been tried by some one. If so, I should be glad to hear from them through your columns. I have fourteen acres where I intend to test it next season, and see if it proves to be as valuable in practice as it appears in theory. We hear much now a days about the deterioration of the wheat crop, and it is my opinion that it is almost entirely caused by the deterioration of our farms for the want of manure.

John C. McVean.

Scottsville, Monroe Co., N. Y.

WILL RYE TURN TO CHESS?

I ask the question because by many in this part of the country it is believed that it will, although not by me. A few years ago I was in a mill when a man of my acquaintance brought in a grist that he called wheat; there was certainly as much cockle as wheat, with a fair allowance of chess. "My friend," said I, "why do you sow such stuff as that?" "When I sowed it," said he, "there was but little cockle in it, but the wheat has turned to cockle, and I cannot help it." Now, this man thought first because he gathered more cockle in proportion to the wheat than he sowed, that the wheat had turned to cockle.

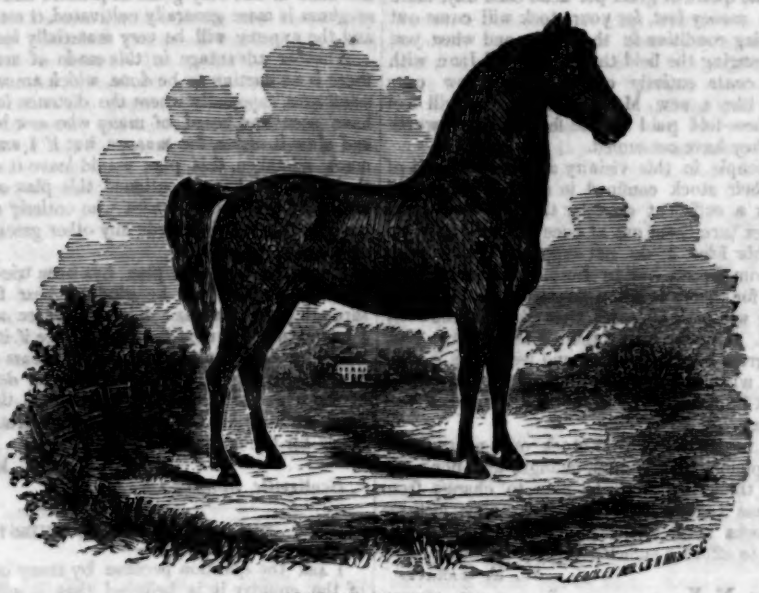
Did ever any one attempt to find out how much more seed may be obtained from a single grain of chess or cockle than from a grain of wheat or rye? While wheat and rye will winter-kill, chess seldom does. This, together with the greater amount of grains grown from the same number of seeds sown, explains, probably, the true cause of the apparent change of wheat and rye to chess.

I had a piece of rye the last season that was badly winter-killed. In fact there was more chess than rye on the ground, although there was but little chess in the rye when sown. This shows that while the rye was killed by the winter the chess was more hardy, and escaped. Farmers should not sow cockle or chess with their wheat or rye. If they do, and reap, they will be sure and find the cheat, if not the wheat.

A. Titus.

Yorktown, Westchester Co., N. Y.

National Wealth.—"There seems to be," says Franklin, "but three ways for a nation to acquire wealth. The first is by war, as the Romans did, in plundering their neighbors; this is robbery. The second by commerce, which is frequently cheating. The third by agriculture, the only honest way, wherein a man receives a real increase of the seed thrown into the ground in a kind of continued miracle wrought by the hand of God in his favor, as a reward for his innocent life and his virtuous industry."



GENERAL GIFFORD, JR.

"GENERAL GIFFORD, JR."

Among the many beautiful stallions, says the Palmyra *Courier*, exhibited at our Horse Show last week, we noticed a capital specimen of a horse, owned by Eliab Yeomans, Esq., of Walworth, N. Y., known as the "General Gifford, Jr.," horse. In his general form, although he is but three years old,) he possesses the most important requisites in a stallion, viz:—"as much goodness as could possibly be condensed in a small space." His head is fine, eyes lively and prominent, his chest capacious, barrel round, loin broad, back short, quarters long and muscular, flanks deep and full, limbs short-jointed, flat and sinewy; a lively, quick action, with head up, and an intelligent and docile temper and spirit. Color, chestnut, with no white. General Gifford, Jr., was got by old General Gifford; grand sire, Gifford; great grand sire, Woodbury; great-great grand sire, Justin Morgan. Dam, a beautiful, clean limbed and very active animal, of Messenger descent. General Gifford, Jr., took the first premium at the Show.

Turnips and Carrots.—My testimony is in accordance with that of "B." of Niagara Co. The white carrot not only yields better, but I have always found it harvested much more easily. I consider the popular notion that the yellow is best and more nutritious, founded in error.

I received from B. P. Johnson, Esq., of the State Agricultural Rooms, a new variety of turnip—River's Stubble. They have done nobly this season. I am a friend to turnip growing, but consider it useless to undertake their growth, even on very rich land, without a liberal dressing of rotten manure. Let the successes and failures be reported. Who fails in growing turnips on land manured especially for them? I never have—have you, reader?

Homer, N. Y. Jno. Sanfield.

MANAGEMENT OF MILCH COWS.

As soon as grass begins to fail in the fall, milch cows should be well fed on good warm "slops," that they may not get a "backset,' and kept at night in a warm and comfortable stable. If the farmer prefers using *hay*, they should have all of it they will eat up clean, and each night and morning a feed of from four to six quarts of "shorts," wet with about the same quantity of warm water. Or a more economical way is to feed them twice a day with about half a bushel of nice, clean, cut straw, mixed with about three gallons of meal,—two-thirds "shorts," and one-third "finished middlings," wet with three gallons of warm water. They will then need no hay, and give an abundance of good, rich milk. Corn is too *heating* for milch cows, and too much of a tendency to fatten.

The stable should be thoroughly cleaned every morning after the cows are turned out, and littered with clean straw. When it is stormy they should remain in the stable until the middle of the afternoon, when they should be turned out to get water.

Salem, Ohio. David Street.

Pumpkins.—There is much difference in pumpkins. I had a variety which kept much longer than the common sort, without freezing or decay. They were solid-fleshed as the squash, and should be propagated. I suppose I have some of them now, but, as the seeds got mixed, I cannot tell until winter. Who else has them? Save their seeds in abundance, and distribute them at your winter Agricultural Meetings. Send some for distribution to the office of the *Genesee Farmer*.

Homer, N. Y. Jno. Sanfield.

Six Drachms of Alum, dissolved in quart of sage tea, will stop a horse from frothing at the mouth.

Genesee Farmer Prize Essays.

ON THE BEST METHOD OF SEEDING LAND TO TIMOTHY OR HERD'S GRASS.

I have very little acquaintance with Herd's Grass, but can speak from a number of years' experience with Timothy.* Timothy is one of our favorite grasses in this location, latitude 38, and I am satisfied will always pay well when put in right.

In the first place it is all important to procure good, clean seed, and the surest plan is for farmers to save their own seed, when it can be done. When the Timothy is quite ripe, cut it carefully with sickles; tie it up in small bundles, some three inches in diameter; set them up in small shocks, of some 10 or 12 bundles each, out in the field, where it should remain exposed to the weather until it will rub off pretty freely with the hands; if necessary, change the bundles, that is, put the inside ones outside, in order that it may all have the rains, sunshine, &c., until it will rub out freely. Then, when it is dry, rub or thrash it out, (a careful hand could sow it in the chaff very well) but it is preferable to have it carefully cleaned with a good mill, when it will be ready for use, and should be kept in a cool, dry place until sown.

The next and most important step is to prepare the ground, which should be pretty thoroughly broke up in August. Oat stubble is preferable to most other ground, but it must be clean of all extra straw or litter, &c., before plowing. (Ordinary stubble will not hurt.) As soon after the first of September as the ground can be got ready, if seasonable, is the best time to sow, but it will do very well during all the month of September, and even until the middle of October, but after that it will be rather difficult for the young grass to get a good start to stand the winter. In our latitude, 38, the weather is generally two dry and hot before the first of September to sow, and frequently some time later; but the first seasonable weather in September is the proper time.

It is useless to lay down any certain or definite rules about how much plowing, rolling, harrowing, &c., the ground should have, for we must be governed by circumstances. It should be thoroughly plowed, and as much rolling, harrowing, dragging, &c., as may be necessary to pulverise and level the soil; and if in any ways inclined to be wet, it should be drained. (Such land is excellent for Timothy.) *Underdraining*, of course, would be preferable, but surface draining will answer. It can be pretty well done with the plow in breaking up, or the last time it is plowed, if plowed more than once, by making the lands about 18 feet wide; and just before the last harrowing, preparatory to sowing, open the valleys or old furrows again with a two horse plow, and complete them, if necessary, with hoe and spade: also a few cross furrows if needed, for it must be distinctly understood that no surplus water is to remain on the ground.

Should there be stumps or similar obstructions that cannot be got out handily, they should be dug around and leveled, and so of every little abrupt knoll or hollow, in order to give the machine or scythe a good bottom to work upon. The last thing to be done before sowing is to lay off the ground. A stick of wood will answer, something like a short, thick sled runner, with a clevy and single tree for a horse in the forepart, and a handle for the driver in the afterpart, which will make a broad, flat mark, that can be seen without any trouble. The lands should be five feet apart for sowing by hand. Some prefer laying off and sowing both ways, but a good machine or a good steady hand can sow it very accurately one way.

One more important point to be observed is the quanitity of seed used per acre. There is a great difference of opinion about this matter. Some say one gallon, some one gallon and a half, and some as high as half a bushel per acre. My experience demonstrates to me that one peck (rather over than under) is about the proper quantity for any ordinary soil. But should the ground be very foul with bad seeds, a half bushel will not be a great deal too much to choke them out. If less than a peck per acre be used, there will be so much more chance for a crop of weeds the first year. The old adage will apply here, viz: Nature abhors a vacuum; and just as certain as there is any amount of space left not covered with the Timothy seed, it will grow up the first season with weeds and foul grass. On the other hand, if the seed is properly put in, we may look with confidence for a good crop the first season, (I have never yet failed,) and if the Timothy should be too thick it will thin itself.

It should be brushed in with a good heavy brush, and, if necessary, the water furrows again opened with a one horse plow. Then, in the spring, if there is any obstructions on the ground, such as stones, roots, sticks, &c., they should be removed, and the ground well rolled, as soon as dry enough, which will leave it in good order for mowing.

Spring sowing is very uncertain with us, and unless under a great many favorable circumstances, such as good clean ground, good weather, &c., should not be attempted.

J. L. K.

Jefferson County, Ky.

* Timothy is called Herd's Grass in New England.—Eds.

ON THE MANAGEMENT OF CALVES.

[We have received a number of excellent Essays on this subject, and the committee, after considerable hesitation, have selected out the two following, and award a premium to each of them.]—Eds.

The calf should be taken from the cow when one or two days old, and taught to drink new milk. As soon as it will drink milk readily, or when about eight or ten days old, part skim milk may be added, first warming it to the proper temperature, with the addition of about a table spoonful of corn meal, stirring it while drinking. When about two weeks old, give a little sweet hay once or twice a day, if in winter or early spring, and as soon as the grass starts, let it have the run of the calf pasture. The skim milk may be gradually increased, and the new milk diminished, until it is about three weeks old, when the whole feed may consist of skim milk, and the meal increased to about half a pint. This course should be taken when it is an object to make butter. If butter is no object, of course feed new milk.

It must be borne in mind that all changes from the natural course should be gradual, as there is much danger of bringing on the scours at this tender

age. A very good way is to make a porridge, by stirring in buckwheat flour, and heating to the boiling point, and when sufficiently cool, feed; but this is more trouble than to feed corn meal, and no better. The feeding should not be left altogether to the boys, but they should be carefully watched, and if there are any symptoms of scouring, immediately return to new milk, fresh from the cow. This has always cured with me. But if the changes of feed are made gradually, and the calf is fed regularly, and not too much at a time, and provided with good bedding, and a shelter from cold storms, there is not much danger of the scours.

When the calf is about four weeks old, a little sour milk may be added, and gradually increased until the whole feed may consist of sour milk. Some calves will drink it readily the first time; others want considerable coaxing, but by adding a little at a time, and increasing gradually, they will soon drink it, and will not be so apt to scour as when the feed is changed it once.

When the calf is about four months old, feeding once a day will be sufficient. I am now feeding mine once a day, on sour milk, with the addition of about a half pint of meal and nearly a quart of wheat bran stirred into the feed, and they are growing finely.

They should have warm shelter the first winter, with plenty of good sweet hay, with feed of roots once a day, together with bran and oat or corn meal; and when they are turned out to grass in the spring, they will commence growing immediately, while those that have been but half fed and cared for will require half the summer to make them as good as they were in the fall; and when once stunted in their growth, as they often are the first winter, they never recover, but always remain inferior animals.

It should always be borne in mind, in feeding young and growing animals of any kind, that nothing is gained by stinting their feed. They need a greater variety of food, and of a more nourishing nature, than the one of mature growth, for in addition to the natural wear of the system, their frames should be continually enlarging; and where are they to obtain this increase of bone and muscle but from the food which is given them? C. C. Wilson.

Newfane, Niagara Co., N. Y.

ON THE MANAGEMENT OF CALVES

The management of calves must necessarily depend much upon the object the owner of them has in view. If they are designed for the butcher, the quickest and cheapest method is to let them take the milk from the cow in the natural way. If they are to be raised, and their value is to be the only consideration, by all means let them run with the cow. Letting them run with the cow is objected to by some, "because," say they, "the calf does not allow the udder to fill with milk, consequently it becomes permanently contracted and materially injured." This kind of reasoning may, at first, appear correct. But cases that have come under my observation fail to prove it so. When we consider that Nature's laws are perfect, and that we are infringing upon one of them by removing the young from its parent, we are led to doubt the theory altogether. Many farmers attempt to raise a calf from each cow, and make butter from her at the same time. This is like trying to raise two crops upon the same ground at the same time; *one or the other must be deficient.* Calves should never be fed with sour milk. They will sometimes do "very well," but they will do much better if the milk be sweet.

It is very important that calves be well fed and cared for during the first year of their lives. If they are to be raised by hand, they should have the milk that is taken from the cow, the first four days after she comes in, as it is particularly adapted to their wants at this age. After this, they may be fed with milk skimmed before it is sour, and mixed with an equal quantity just taken from the cow. They should be fed in this manner until they are at least two months old, when the new milk may be dispensed with, and a handful of oat meal sifted from the bulls and stirred into the skimmed milk. In skimming milk for calves, if some of the cream accidentally escape with it, it need not cause alarm, as it will not injure them seriously. Calves should not be weaned entirely until they are four months old. Milk once a day, with a pint of oat meal, will do very well for the fourth month, when the milk may be taken from them entirely, and the quantity of meal increased to a quart per day, (it need not be sifted after they are weaned) and continue so until they are turned out to pasture.

The spring they are a year old, in addition to the above, they should at all times be securely sheltered from the cold, have access to water at all times, have good pasture during the summer, plenty of good hay in the winter, and a little salt mixed with sulphur occasionally, to prevent their becoming lousy. "Ah," says an old-style stock raiser, "calves at such a rate will not pay." Try it. If they will not pay when they are well fed, they certainly will not when they are only half fed. If they are well fed and cared for, it will not be necessary for a boy to go round in the morning to lift them up, but on the contrary they will be able to help themselves, and each one will be worth more than any three raised dish-water fashion. M. Garnsey.

ON THE MANAGEMENT OF BARN-YARD FOWLS.

Farmers are generally too apt to *neglect* their poultry department, taking good care of their other stock, but leaving their barn-yard fowls to care for themselves. Like everything else that is worth caring for *at all*, it is to the owners' advantage to take care of them *well*.

They should be provided with a commodious, clean, well-ventilated house to lay and roost in; the apartments for these purposes separated by a partition. The nests should be large, and made of clean *straw*—renewed every spring—as hay is more inclined to breed vermin. In the winter they should be *regularly* fed with corn, twice a day, in the morning and evening, and an occasional meal of boiled potatoes, meat, old bread soaked in warm water, &c., will be highly relished, and add to the number of eggs. Lime and gravel should be always within their reach. When the ground is covered with snow they should be fed in the poultry-house.

In the spring when the weather has become settled, those hens that wish to set should be provided with from ten to fifteen eggs each—according to the size of the hen. When the chicks are two or three days old, they may be removed, with the hen, to a

coop with a *board floor;* as roosting on the damp ground is a prolific source of disease, and hundreds of young chickens die annually for the want of a little care in this respect. The coop may be placed in any convenient situation in the yard, where the chicks may run in and out at pleasure, to catch the flies and insects, so numerous at this season of the year. They should be fed *regularly*, twice a day—early in the morning and about four o'clock in the evening—with corn meal well mixed with water; and the hen should be supplied with a little shelled corn every day.

When the chicks are about a week old, they may be permitted to roam at large with the hen, when the dew has dried off the grass, and on pleasant days; but must be returned to the coop every evening at feeding time, as they should always be fed where the older fowls cannot deprive them of their allowance. Fresh water should be supplied them every morning in a shallow vessel.

When five or six weeks old, they may be considered out of danger, and left at liberty to roam with the other fowls. I neglected to state that the poultry must have a constant supply of *fresh* water, as it is indispensable to their health and productiveness.

As the farmer who adopts this plan will have many fowls to dispose of annually, he should always keep those which incline to lay and roost, in the hen-house, and one cock to every twelve or fifteen hens will be sufficient. Hens which roost about the barn or other out-buildings, and steal their nests in some secret place, cause more trouble than they are worth, and should be the first to be parted with.

By feeding in the manner recommended, they will be in good order for the table at all times.

Salem, Ohio. DAVID STREET.

ON THE CULTIVATION AND MANAGEMENT OF TOBACCO.

BEFORE any one undertakes to cultivate tobacco, he should consider well whether he is so situated that he can make it profitable. And to arrive at a sure conclusion, he should understand thoroughly the whole *modus operandi*, for there is no crop that requires such constant attention, nor any that suffers more from neglect.

BEST SOIL FOR TOBACCO.—New land is the best for tobacco, not only that it is more free from cut worms and weeds, but the soil is not liable to bake, but remains loose, no matter how much rain falls. I always prefer oak land to the bottoms, for though it does not produce as heavy tobacco, it will bring a finer article, and is much easier handled without injury.

PREPARING THE SEED BEDS.—When clearing the land, it is best to pile some very large brush heaps to be burned as soon as the frost is out of the ground, and it becomes sufficiently dry. Care should be taken to have plenty of them, for they are for plant beds, and better have five times too many plants than to be lacking. When these heaps are burned to ashes, dig the ground, ashes and all together; rake and pulverize thoroughly; mark it off in equal distances, that you may sow your seed as evenly as possible; then sow about one table spoonful of seed to thirty feet square. The seed should be mixed with dry ashes, that they may be more equally distributed. Now press the bed all over with the feet. This presses the seed sufficiently deep in the ground. Cover the beds with brush as a protection from late frosts; and after the plants are up, if the weather is dry, water occasionally with water in which good manure has been soaked. It is desirable to have the plants large enough to set as soon as possible, otherwise a season may be lost, as has been the case here this year.

PREPARING THE LAND AND SETTING OUT THE PLANTS.—As soon as the ground is in plowing order, the tobacco ground should be broke. Then about the first of June or earlier, if the plants say so, cross plow, and do it well; then harrow completely; the ground should be put in the best possible order. It should next be laid off, or what is better, two furrows thrown together, forming a ridge. These furrows or ridges should be three and a half feet apart. The crop will be easier managed if the ground is marked off the other way, as it then can be plowed each way.

The first good season should be made use of after the leaves of the plants are the size of a dollar. The plants are to be set on the ridges, taking care to press the earth well to the roots. It is better to have hands enough to set all the ground prepared at once, than to depend on future seasons. After the plants are set, all that is necessary is to keep the ground clean until they have shown ten or twelve leaves.

TOPPING THE PLANTS.—Now the cultivator must begin to use his best judgment, for the plants must be topped, and if topped too low there is waste; if too high there is danger of their growing too long and being caught by frost; but, as a general rule, after breaking off a few of the bottom leaves, which is called priming, pinch out the top or bud just above the tenth leaf. With a little practice it will not be difficult to determine where to top. It will be necessary to go over the patch several times before this process is completed, as the plants are not all the same size. When the top is broken out the suckers start, and show themselves directly at the butt of every leaf. These should be pinched out, and the patch should be gone over every week for this purpose.

In about three or four weeks after topping, the tobacco will become of a lighter hue, and somewhat spotted. The time to cut can be ascertained by doubling a small portion of the leaf; if it break it will be found to be ripe.

CUTTING, HOUSING AND CURING.—Now we have got through with the cultivation of the weed, but what we have done is almost nothing. Now comes the tug, the cutting, housing and curing. If the tobacco is generally ripe it is better to cut all clean as we go, than to have unripe plants for another cutting. Great care should be taken in handling not to bruise the plants, as every bruise will show when cured. When cut it should be laid with the butt to the sun, and as soon as wilted it should be drawn to the barn, where the hands are ready to stick and hang. The speediest way is to have one end of the stick sharpened, that an iron spear with a socket may be put upon it, the other end to be put in a large auger hole at a proper height. The plant can now be run on the stick over the spear quite fast. Ten or twelve large plants will be enough for a four feet stick. When a quantity of sticks are filled, they should be hung. Begin at one side and fill from top to bottom,

putting the sticks tolerably close, say six inches apart. When the barn is filled much depends upon the state of the atmosphere; if warm and clear, it is not so difficult as when rainy, or even damp and cloudy. In a day or two, if the weather is fine, the tobacco will be considerably yellowed. Small fires should be built all over the barn, under the tobacco. This hastens the colouring. When the ends of the leaf begin to curl, the heat must be increased gradually. It is impossible to give a certain time in which to increase the heat, as all depends upon the colour of the tobacco. Experience is necessary here, for if the heat is raised too soon the tobacco will be of a greenish colour; if too late it will be red. Mottled or yellow sells best. But after hot fires are under it, keep the house as near one heat as possible until the ribs and stems are dried; you may then slacken the fires, for now there is danger of burning it up; but do not take the fire entirely away until the stalk is dried; if you do, the leaf will change colour and become red.

Now, whenever there comes a damp spell of weather through the winter or spring, the tobacco will become soft and may be stripped from the stalk, and about ten leavds tied together, by wrapping them tightly around the butt end with another leaf. This is tying them in hands. These hands should be kept smooth and straight. While stripping it should be the business of one man to sort or separate the tobacco, making first, second and lugs. The tobacco should now be hung up again, unless it is required to be taken away soon, in which case it should be put in bulk, and should be bulked at least a foot above the ground, and in a part of the barn where it cannot get wet. When the stems will break one half way up the leaf, it is in good order to bulk down, provided the weather is not too cold. If it has to stay in this condition long it must be noticed often, for it may get too high in case, and spoil directly. It is now ready for the manufacturer, and the quicker you get the money for it the better for all concerned.

W. D. M.

Pinoak, Warren Co., Mo.

ON THE BEST MEANS OF ESCAPING INJURY FROM DROUTH.

Drain your land of all surface water; keep it in a high state of fertility; work it only when it is dry; plow your manure under, *on heavy soils*, in an unfermented state; but on *light sand* when it is well rotted; plough as early in the spring as the land is dry enough. If you have a green sod to turn under, all the better. Keep all hoed crops and fallows free from weeds, by destroying them as soon as they are visible; stir the surface of the soil frequently during a drouth, whether there any weeds or not. On all high land apply plaster early in the spring to clover, peas and barley, and to buckwheat, and all hoed crops as soon as the plants are up.

In order to have a second crop of grass on meadows, either for seed or pasture, the first crop should be mowed early, as the ripening of grass seeds draws from the earth a great amount of moisture, and it is admitted by chemists that after grass has attained its size it loses by delay in cutting, and makes hay of poorer quality as it grows riper, and the injury done to the soil for the time being is easily shown by the following experiment: Mow one part of a field of clover as soon as the first blossoms begin to turn, and let the remainder stand until most of the heads are black; then mow it, and note the growth that each will make in a certain time after it is mowed; and if showers and other circumstances are alike favorable, the part mowed first will have as good an after growth in two weeks as the last part will in four.

W. S.

Canada West, Aug. 25th, 1857.

ON THE BENEFITS TO BE DERIVED FROM COMPETITION FOR THE PREMIUMS OFFERED FOR SHORT ESSAYS BY THE GENESEE FARMER.

It brings out much valuable information which might otherwise remain unknown, and scatters it broadcast over the land. It enables us to profit by the experience of those who have established facts by actual experiment. For instance, there is a point in dispute between two farmers in regard to manuring corn. One contends that it is much the better way to manure it in the hill, while the other declares that it is not as good nor as expeditious a method as it is to spread the manure on the land and then plow it under. But neither of them knows to a certainty, as they have not experimented carefully, and then as carefully compared results. Both being slightly prejudiced, each recommends his own method. In the meantime, some more enterprising farmer, and one who does not do business by guess, has experimented, for his own satisfaction, upon the subject in dispute. He has weighed and measured accurately; kept debt and credit carefully, and as there was a premium offered for an essay on that very subject, he has given us the whole *modus operandi*, with its result. Thus the theory of one or the other of the disputants is forever exploded; the facts in the case established, and placed at the disposal of thousands of other agriculturists.

Competition for premiums bring out Essays which afford us ample evidence that although agricultural science has for ages been wrapped in the serpent-like coils of Ignorance and prejudice, it has at length burst its bonds assunder, and is traversing our fair domain with giant strides, to the joy and admiration of those who appreciate its value, but to the terror and dismay of old fogyism and all its votaries. Notwithstanding the clamorous outcry made by some farmers against science, in its application to agriculture, or "book farming," as they term it, the Essays with which we are favored through the medium of the *Genesee Farmer*, prove beyond all reasonable doubt, that it is possible to establish a rule of action which would apply generally to every branch of agriculture. And that it is in fact a science to properly cultivate a field of wheat, or to rear a domestic animal, as well as it is to measure the distances to the planets, or to calculate the period when eclipses will occur. Agricultural science has indeed enabled us to unlock the earth as it were, and thereby placed within our reach priceless and inexhaustable treasures.

Competition for premiums tend to increase confidence in agricultural literature, and thereby to promote the circulation of agricultural journals. Much of the agricultural matter in circulation has emanated from the pens of men who possessed unlimited means; men who could build upon an extensive scale; lay out and adorn pleasure grounds; plant and train ornamental trees; cultivate a great variety

of fruit, &c., without any regard to expense. The writings (and may we have more of them) of such men have given birth to expressions like the following: "It is all well enough for rich men to take agricultural papers and to write for them. If I was able to follow out their plans, and do as they do, I should like it well; but since I cannot, I must be content with doing the best my means will allow." The great expense attending the operations of the former so obscures the mental visions of the latter, that he does not discover that the same principle which enables the man of wealth to rear five hundred beautiful and profitable trees, will enable him to rear five. So he consoles himself for the deficiency, with the idea "I must be content with doing as well as my means will allow." But soon he discovers that some of his neighbors, whose means are as limited as his own, have deviated from that "good old way." One is rearing much better stock than formerly; another is underdraining; a third is subsoiling, and making various other improvements, which he never considered his means would allow him to make, and in fact never saw the propriety of making. He sees the wonderful effect of these "new notions," and his curiosity is so much aroused, that he determines to ascertain where his neighbors obtained them. Consequently, one fine morning he walks over to where neighbor B. is plowing with two teams. One of the teams turns a furrow in the usual manner, only a little deeper. B. follows with the other one, a subsoil plow, loosening up the earth in the bottom of the common furrow to the depth of one foot. After the usual salutations, A. says, in rather a depreciating tone,

"You appear to have some curious ideas in regard to farming; where did you get them?"

"O, I take the *Genesee Farmer;* I have taken it nearly three years. It contains many short Essays, written by common farmers, like you and me. These Essays are written in competition for prizes, and treat of a great variety of subjects, subsoiling among the rest."

A. almost says "fudge," but restrains himself, and asks, "Do you expect your crop will repay you for all this extra trouble and expense?"

"I have no doubt of it. You know Mr. C. has experimented two seasons with the subsoil plow. Two years ago he planted two acres with corn; treated it all precisely alike, except that one acre was plowed in the usual manner, and the other was subsoiled (the subsoil being a gravelly hard-pan.) The result was, the heavy rains which came on just after planting, deluged the corn upon the acre which was not subsoiled, while the loosened subsoil upon the other acre drank in the water, leaving the corn to grow and come to maturity, without any interruption.

"Well, I do not know but it would be a good plan *in a wet season.*"

"Yes, and in a dry one, too. Last season Mr. H. experimented in the same manner and to the same extent. The season, you recollect, was extremely dry. The corn upon the subsoil land struck its roots deep into the moist, pulverized earth, and seemed to bid defiance to the scorching rays of the sun, while that upon the other acre drooped and withered so much that it proved a total failure, with the exception of a few puny stalks, and a little unsound corn."

A. feels the force of such reasoning, and mentally determines to subscribe for that paper, and read for himself. How often is the paper of which you speak issued, and what does it cost?

"It is published monthly, and costs fifty cents a year."

A. starts for home with some new idea working upon his brain. He begins to believe that if Mr. B. can subsoil, he can too. He traces many of the "new notions," which he finds among his neighbors, to their origin, and ascertains that they were derived from that little paper which costs but fifty cents a year, and contains so many prize Essays. Consequently he improves the first opportunity to become a subscriber, and is now zealous in recommending it to others. He has also come to the conclusion that "doing as well as my means will allow," is doing much better than he formerly supposed it to be.

The prizes competed for should not be passed over in silence. It may safely be presumed that very few farmers would take the pains to write Essays in competition for the prizes offered, were the mere value of such prizes, in dollars and cents, the only consideration. But their character is such as to render them worthy an effort by every farmer who wishes to make additions to his library of such works as may throw much light upon the various branches of his occupation. In many a time of need, they will prove to be his true and steadfast friends; friends which no enemy can alienate, and which he may safely introduce and recommend to the rising generation.

M. GARNSEY.

Middleburgh, N. Y.

HOW CAN FATHERS RENDER FARM LIFE ATTRACTIVE TO THEIR SONS?

STANDING on the dividing line between childhood and manhood—with the joys and sorrows of the first still fresh in my memory, and the strong hopes of the second firmly rooted in my heart, I claim a hearing in this important matter.

First of all I say "*remember;*" remember your own boyish days, with their lights and shades, their days of toil and of relaxation; remember your own thoughts and feelings as a "*son,*" toward your father. Ponder well *his* system of farming and also of government, and then, after having added the weight of experience which the years since gone have given you, study diligently to know whether his plan can be improved, whether your own homestead cannot be made still pleasanter than the one your memory calls "home." How few that have reached the position of father, but can recollect distinctly some periods in their minority when the parental will clashed with their own—when in their heart they said "he is unreasonable." Now, when the youthful fire has departed, and calmer, maturer years have come instead, is the time calmly to review those scenes and pass judgment. If the father was right, then, as a father, follow his footsteps; but if still the voice of judgment says "I was right," then be careful never to place your own son in the same or like predicament.

I speak candidly when I say that the aged are quite *apt* to cling to ideas cherished in younger years, even though science and experience teach somewhat differently. Many a son who reads in an agricultural paper of some new and valuable discovery in the vegetable kingdom, or some rare improve-

ment in the animal, or some hint thrown out for experiment, get only a "humph" for his pains when he submits it for consideration to his parent.

"I had rather have fifty more than fifty less," says old uncle P., when his reading, reflecting boy, "JIM," had been telling him of the products of certain *acres*, devoted to the cultivation of grapes, cranberries, rhubarb, hops, &c.; and so the old gentleman and "JIM" still toil on, on their hundred odd acres, trying in vain to keep the endless rods of fence in repair, the countless upturned stones picked off, the thistles kept subdued, and the crops gathered in proper season. Man, it is true, was made with reason far above the brutes: with powers astonishing. But *one* man cannot do everything; *two* cannot, and he is not implanting a love of farming in the hearts of his sons, who renders them slaves to "work."

There is no use in the farmers grumbling that "*boys* don't like to work." Few of us really like to work, merely for the "fun of the thing." The lawyer, laboring night and day to clear a client—the physician riding miles in a storm to visit the sick—the mechanic and artisan, each and every one labor for a reward. It may be money, or it may be an equivalent in some other form, but still a reward. So the farmer works early and late that he may produce grain, meat, and all things necessary for the sustenance of himself and family. So boys, if they are not, should be presented with some inducement to be steady, active and useful. Make men of your boys; tell them your plans of improvement; tell them how much you are in debt, if any, and ask them to help with a long pull, a strong pull, and a pull altogether, to remove the incumbrance. If they have a taste for the beautiful, assist them to use it in a proper manner; if a love of fruit, grant them space to plant their grape vine, dwarf trees, strawberry bed, &c., &c.; you will not regret the time, no, never. Is it from the neat, shaded house, with its noble trees in front, its well swept walk, lined with fruits and papers, and its open window, displaying a table loaded with books and papers that the "*boys run away?*" I answer, no! Is it the boy who has been sent to school and advised to get knowledge, and, furthermore, has been assisted in this pursuit at home, that gets discontented with that home? Again I say no. But the boy who is *jawed* at by his father for every accident—the one who never has a recreation day—the one who never has a cent to call his own—the one who is kept from school except now and then a day—the one who has ever to work with dull tools, milk kicking cows, and drive superannuated horses,—these and many others *do* leave, and oft times with reason. How oft I have remembered with gratitude my own father's habit in regard to an accident. He sometimes enquired how it happened, and volunteered a word of advice, but no threatenings passed his lips; no angry lecture on boys' carelessness and waste. No "*government*," do you say? I challenge the world to beat it. He was as *firm* as the everlasting hills, but he had the entire control of his temper and his tongue. He knew that a child who has had bad luck feels *bad* enough, and will be more careful of offending a kind father than a cross one.

Have I been obtuse or lengthy in my statements? Then I will sum up as briefly as possible. Teach your boys by your own example that you are interested in your business; that a farmer may be a *gentleman*; enlist their efforts with your own; arrange your business in such a manner that each and all may have some time to devote to horticulture, reading, and self improvement; gratify them somewhat if your means will admit, by using a good team and having a pocket book of their own. Laugh if you will, or frown, and say it's the way to ruin them; make them penurious, vain, and all that sort of thing. I say *it is not so*. Who will like farming the best—the young man who has a good horse and carriage to use on a holiday, or the one who is sent to mill with patched breeches, astride a mule, with a grist on behind? Echo answers, who?

McLean, N. Y. M. D.

WHY IS FARMING CONSIDERED A DEGRADING VOCATION?

AGRICULTURE is, and must ever continue to be, the most important secular employment of man. The very existence of the human race depends upon the labors of those engaged in it. This alone should be sufficient to shield it from the reproach of the term "degrading." But it is of the earliest date, and of the highest origin. We can trace it back to the "Garden of Eden." Its author was the Creator of the Universe. It was in man's state of original integrity, that he was placed in the Garden, "to dress it and to keep it." And it must have been considered by the All-wise, himself, a most honorable employment. How foolish then, nay, how sinful, for man to consider that degrading which God in His infinite wisdom, has instituted for the benefit of His rational creatures. Why, then, is this vocation, of such sacred origin, considered by man degrading? It must be because of the depravity of the human heart. But this shows itself in so many different ways, and is found running in such innumerable channels, that it will be necessary to mention some of the most prominent of them.

Pride, which holds such universal sway over mankind, but especially those whom fortune has loaded with wealth and affluence, makes them despise all who are so much beneath them, as to labor for an honest living. The farmer and his vocation are despised among the other laboring classes.

Indolence, with its long naps, and easy chairs, induces many to consider the labor of a farm life degrading, and entirely below the dignity of a gentleman.

Others, again, are influenced by the love of money, which is the root of all evil. They seek for some employment by which they can speedily gain wealth, and hoard up riches. They despise the slow and steady gains of the farmer, and consider his vocation a degrading one.

Another great reason why many consider farming a degrading vocation, is, because they are ignorant of its true nature and character. There is a true dignity in labor, which they do not appreciate; a secret feeling of pleasure, to which they are strangers. Certainly, no one, who knows and feels the important position it sustains to man—its high and holy origin—its health-promoting qualities, and the happiness it sends home to the heart of the cheerful husbandman, can consider it degrading.

The reasons which induce men to consider farming a degrading vocation are so numerous that it would be entirely out of the question to attempt an enumeration of them all, in such a limited Essay. But I

must beg pardon for mentioning one more reason, which must have a good deal of weight with those disposed to regard the farmer's business as degrading. It is the manner in which farming is conducted by many who are engaged in it. Slovenliness seems to be the order of the day. We find fences old and broken down, and patched only with the natural growth of bushes and briars. We find fields growing poorer with every crop, until the owner can scarcely raise enough of grain from them to remunerate his toil. This is rather hard on the constitution, and often induces a disease called the "West fever." We see the few farm buildings small, badly arranged, and in a very indifferent state of repair. When we come to examine the stock, we shall probably find some of the breed that is used for making baits for the crows and leather for the shoemakers. Fruit culture, too, is much neglected by farmers. We often see, instead of a beautiful, thrifty orchard, loaded with delicious and carefully selected fruit, a few trees, rapidly decaying for want of timely care. The farmer's garden, too, is generally much neglected. That spot of ground, which should receive such particular attention, is often suffered to be sadly defaced by weeds, instead of being decorated with flowers. All these things combined, cannot fail to leave an unfavorable impression upon the mind of one unacquainted with farm life. Let farmers carry on their business with system, neatness and order, and the number who consider their vocation a degrading one will be greatly diminished.

Mahoning, Penn. W. H. M'CREERY.

HOW MUCH EDUCATION, AND WHAT KIND, DO FARMERS NEED?

THE answer to the first part of this question need be but short. *All they can get;* but the pertinency of this response may perhaps be made more apparent by a proper answer to the last part of the question—"what kind?"—which cannot be so readily told; but, by your leave, I will attempt a concise description of what, to me, seems necessary for the complete farmer to understand. First, the common branches, reading, spelling, writing, and arithmetic, with perhaps geography and grammar as an addenda, depending somewhat upon circumstances. Next in importance, if he is an American, is a full and thorough knowledge of the English language, as this opens at once the doors to all the arts and sciences, and without which these portals remain in a manner closed.

In connection with the foregoing and following, should be pursued and never neglected, a physical education; for the farmer, whether he is to labor with the axe and scythe, or superintend the labor of others, needs the full development of every nerve, bone and muscle, with a full knowledge of the most economical manner of applying their forces in himself, his laborers, and beasts of burden. This physical development, education, and training, need not interfere with any other occupation, for the mind cannot always labor, nor can it ever labor to advantage while the body lacks energy and force. It is this physical development which gives to the sons of farmers their superiority in every station of life. It is a true saying that "you can make anything of a farmer's son, but you can make a farmer of nothing else." Since the decline of the Roman empire the value of muscular strength and agility has been unappreciated, but the next generation must and will restore its popularity.

With these foundations to rest upon, he is prepared, if he be able to purchase or borrow books, even independent of teachers, to enter upon the studies of the more abstruse sciences, not essential, it is true, to a laborer, but deeply essential to a director of his own power and that of others, to the economical employment of time, strength, and money. He should study Botany, for a great share of his business is the rearing of shrubs and plants, the nature, habits, classes, and descriptions of which are essential. He should study Zoology, for another part of his business is the rearing or employment of animals, the natures, habits and peculiarities of which he should understand. He should study Entomology, for he will have myriads of insects to contend with, and unless he combats them with that skill and discretion which a knowledge of their habits alone can give, his victory over them is at least doubtful. He should study Geology. It gives him a knowledge of the raw material, upon which he must work diligently and understandingly would he win success. He should study Meteorology and Climatology, for there are adverse as well as genial winds, rains, snows, hails and frosts for him to counteract, or apply to his aid. He should study Chemistry, animal, vegetable, and mineral, for there are constant changes around him, in every kingdom of nature, for him to seize upon for his benefit, or turn to his advantage. Physiology, both animal and vegetable, is important as a study for him, for he must have a care for the health and prosperity of his beasts and plants, and a knowledge of their structures, and the the functions of their parts is indispensable. Philosophy, as applied to his implements, carriages and machinery, comes also advantageously into use. Does any one say that my standard is too high, that it is unattainable by any one who labors on a farm, and earns his bread? I reply that there is no institution so well adapted to the study of the higher branches as home; no teacher so faithful, impartial, thorough, and successful as one's self; no halls so well adapted to study in as the broad vault of Heaven, and the chimney corner; and no place where the education of the body and mind can be so conveniently and profitably alternated as on the farm. Do you wish to study Botany, here are the plants in bloom in your very path. Do you wish to study Zoology, here are the animals, your daily companions. If you would study Entomology, the insects swarm around you, and their habits cannot be a matter of indifference. Does Geology entice you, here is mother earth at your feet, inviting you to an acquaintance. Would you study Meteorology and Climatology, your farm has its observatories; what better place would you have? If Physiology interests you, every animal you slay for domestic use or for the market, is a subject for dissection. Would you study Philosophy, remember that NEWTON's first lessons were taken in a solitary *siesta* under an apple tree. Would you hold communion with your own thoughts; would you reflect upon and digest what you have read, take hold of the plow, the hoe, or the scythe, and your mind will be the more clear for your bodily exercise. It is not necessary to study, that the book should be always in hand; the broad book of Nature is always open before you,

and he who sows and reaps, as well as "he who runs, may read." Do you say that these studies are unnecessary to successful farming? Remember that the cultivated portions of the earth are fast losing their fertility, under the old traditionary system of farming, and that science alone, aided by experiment, perseverance and economy, bring them up to, and even above, their early standard. The farmer who discards science as unnecessary, must emigrate to the newer portions of the earth, and be content with the society and the luxuries they afford; while he who would be surrounded by all the comforts and improvements of the age, must remain where they flourish, and should add his mite of mind and talent fer their promotion. S. B. Peck.

Gorham, N. Y.

HOW CAN SETTING HENS BE TAUGHT TO FORSAKE THE LAZY HABIT?

Make a small open pen, of laths, or some similar material, in one corner of your hen house, about eight inches wide, and of any convenient length and height. Let one of the laths or slats be so secured that it may be easily taken out or moved one side, so that a hen may be conveniently passed into or taken out of the pen. On the bottom of this pen, and running lengthwise through it, set up a couple of laths on edge, and fasten them about the same distance from each other and from the sides of the pen. Run a small perch *across* the pen and the work is done. When a hen wishes to set, put her in there. She will soon find that she can walk leisurely upon the floor, or roost comfortably upon the perch, but she can't *set* without "riding on a rail," and that, they seem to think, isn't decorous. The length of time for which they will have to be confined will vary somewhat, and in obstinate cases it may be necessary to put a few pegs or tacks into the edges of the laths. N.

WHY DO SO FEW FARMERS WRITE FOR AGRICULTURAL PAPERS?

Being a farmer myself, and the son of a farmer, and having always resided among and sympathized with the humble cultivators of the soil, I may be permitted to give *some* of the reasons why so few farmers write for agricultural papers.

Let me premise, that to be able to express one's ideas with ease, and elegance, and perspicuity, upon paper, requires no inconsiderable mental discipline; and that, in years gone by, when the experienced farmers of to-day were educated, the common school system was not matured as it now is, and they finished their studies without becoming expert and correct writers. In fact, in those days, none but students of the higher schools were taught to express their ideas upon paper, and those but indifferently. The writer of this Essay has found, within a few years, while teaching in Western N. Y., men who refused to permit their children to devote any portion of their time to writing Essays, on the ground that it was a useless expenditure of time among farmers. This class of farmers are usually healthy and muscular, with active and practical minds, and frequently quick to discover any improved process adopted by their neighbors, and ready to investigate and appropriate to their own use any new labor-saving machinery which they may see or hear of; but they never write for agricultural papers because of their inability to do so with perspicuity and elegance. Our fathers who write for agricultural papers, are mostly those who have not always been practical farmers.

But there are only a few of the *younger* class of farmers who write for agricultural papers. Why is that? They received, many of them, a better education than their fathers. Some of them at school were polished writers, and close, accurate thinkers. They have been cultivating farms for ten or fifteen years, generally successfully, with profit and pleasure. They study agricultural works, read the periodical literature upon the subject, adopt the improvements of the day, and in fine are industrious, intelligent and wide awake farmers. But they seldom or never write for the press. At first they will plead a want of time. Their farm demands their attention and labor every fair day during the season adapted to the cultivation of the soil. The rainy weather finds them occupied in the barn or the work-shop. Their odd moments are all occupied in reading. They have a farm to pay for; cannot afford to hire their work done or to be idle themselves. During this season they have no time. How is it in colder months? Do not the agricultural journals point out enough "work for the month" to keep the farmer busy each of those cold and dreary months? You, who read so many exchanges, cannot doubt this. Besides, this is the only season of the year which can be devoted to the cultivation of the social virtues. Friends and relatives must be visited; societies attended; social re-unions held; lyceums formed; lectures listened to, and libraries read. The family circle, too, drawing them by the most sacred bonds, demands their attention during the long evenings. Home must be made pleasant and profitable. The bonds of love and friendship cemented more closely. The wife must be relieved from the care of the prattling infant. The husbandman must be a Peter Parley in giving amusing instruction to the children, and pleasing, intellectual entertainment must be afforded to the elder sons and daughters. At this season of the year, even, he finds no time to write. It is emphatically true that, commencing with moderate means,

> "He, who by the plow would thrive,
> Himself must either hold or drive."

After a few years, if the young farmer succeeds by industry and economy in obtaining a competence, and has more leisure time, he has lost his inclination to write. His muscles have become hard and fixed; his fingers have lost their former pliancy, and the mechanical portion of writing becomes irksome. He even neglects to correspond with his old friends and his aged parents. You would not expect him to write for the press.

Again, farmers are a modest and unassuming class of men. They doubt their ability to impart useful information. They prefer to receive instruction. They look to those who make a business of writing and speaking for their daily supply of mental ailment, to the editors of agricultural periodicals to keep them posted up in the agricultural improvements and experiments of the time.

Such are what I conceive to be some of the more prominent reasons why so few farmers write for agricultural papers.

I think it would be better on all hands, were they

to *take time* to write. It would keep them in the practice of expressing their thoughts upon paper—which is an item of importance to every one—and would be of vast benefit to their brother farmers. Something new can be learned upon every farm, and by studying the ways and means of every farmer, however humble he may be. No farmer can write his experience upon his farm for a month, without adding to the knowledge of and benefitting others. We would say, let it be put down as the indispensable duty of every farmer, that he *must* write; as much as that he must read and labor. Let every farmer fully appreciate its importance, and he *will write for Agricultural Papers.* E. Hodges.

Marion, Olmsted Co., Min. Ter.

ON THE PROPRIETY OF AGRICULTURAL SOCIETIES OFFERING PREMIUMS TO PRACTICAL FARMERS FOR THE BEST ESSAYS ON VARIOUS AGRICULTURAL SUBJECTS.

It is not only proper, but in our humble opinion it is the duty of Agricultural Societies to offer liberal premiums to practical farmers for Essays on Agricultural subjects. The object of all Agricultural Societies should be to disseminate agricultural knowledge among the masses, which we think would be accomplished to a great extent by offering premiums, which would have a tendency to create a spirit of inquiry among farmers, inducing them to study standard agricultural works. The effect of such offers would undoubtedly be to call out a vast amount of varied talent which now lies dormant, and be the means of giving to the public a great mass of practical agricultural knowledge which is now confined to individuals or localities. If our National, State, County, and Town Societies could be induced to offer liberal premiums to practical farmers for the purposes above indicated, and publish the prize Essays in their Reports and Transactions, it would doubtless do more to advance the science of practical *Agriculture* than all the premiums offered for the finest horses, the best cattle, sheep and hogs, the longest beet, largest pumpkin, and biggest squash, with all the rest of the stereotyped list too numerous to mention. Every farmer knows it to be his interest to raise the best horses, cattle, hogs, crops of all kinds, etc., but how to do it in the best, cheapest, and most economical manner is what every one wishes to learn. H. H. Taylor.

E. Rodman, N. Y.

THE ADVANTAGES OF AGRICULTURAL SCHOOLS.

In whatever business we engage, we feel it our duty to be prepared to enter it. And if the responsibility connected therewith be great, we are led to doubly exert ourselves, in order that we may be fully competent to undertake it.

There are many things connected with farming that require sound judgment. And the farmer ought to possess a good knowledge of all that he is to be engaged in; for he does not wish to be making experiments, when he does not know that they will profit him anything. It is true, good farmers can educate their sons in all that pertains to agriculture. But our future farmers will not be confined to farmer's sons. There are sons of mechanics and professional men who will not think it below their calling to be addressed with the honorable title of "Farmer." And these must be educated for this station. They can no more enter it unprepared than though it were a "learned profession." Who would think of giving his son to such a profession without educating him? And as we think the farmer's station fully as important as a literary or scientific one, he must also be prepared for it.

Our "Common Schools," at the present day, would come far short of giving the instruction needed in the education of the farmer. Here is the advantage of Agricultural Schools. Those who wish to become farmers may be made thoroughly acquainted with all that is necessary for them to understand. It is hoped that such schools will flourish and spread widely; that our land which yields so bountifully under the blessing of the Great Giver, may never cease to do so for a lack of knowledge to cultivate it properly. Addie E. Fisk.

Girard, Pa.

"IS IT DESIRABLE TO PLANT FRUIT TREES IN THE HIGHWAY?"

If the above question were put in a school-room of boys, there would be but little doubt respecting the answer. But it is not so put, but to the farmer, as a question of profit, or of ornament to the street or highway. On this ground, then, I conceive it should be answered.

It is commonly reported, that in Europe fruit trees are generally planted by the road-side, and the fruit of some of the trees is left to the passers-by. This may be exhibiting a good heart, if not good husbandry. These trees are protected by law, and there may be instances where men of small means are enabled to plant a few more trees than they otherwise would, and reap more benefit. An intelligent German informed the writer, that in his country the government plant cherry trees and English walnuts by the road-side, and that they are under the eyes of a vigilant police.

Perhaps the most ornamental and desirable fruit tree for street planting opposite dwellings, is the cherry, as mentioned above. By the common law of this country, any fruit growing on trees set between the land of the owner and the travelled road, belongs to the abuttor. Hence some farmers have advised the planting of such trees as profitable; while others have done so for the benevolent purpose of giving cherries to the public.

Now cherry trees require considerable care, though not so much as other fruit trees; and for a farmer to plant such trees by the road-side with the prospect of their being mutulated and the fruit stolen, (as would certainly be the case in a thickly settled district) would seem to exhibit a slight redundancy of humanity. Everybody knows of the charge against farmers, that they do not properly attend to the trees planted in their own enclosures. Would it not, then, be requiring too much of them to plant and care for trees by the road-side, where they must lose the fruit, or wage war against pilferers?

On Boston Neck, leading to Roxbury, there is nearly a mile of stately Elms on each side of the broad avenue. Had cherry trees been planted instead of Elms, they would have been abused by the boys, in spite of the extra police; and if, perchance,

they might have escaped this, would any one pretend to say that a vista of hollow-hearted, deformed and antiquated cherry trees would be as great an embellishment to the place, or as desirable to the citizens, as the present graceful forest trees? So of the shade trees on the Western Avenue, or Mill-dam; supplant them by cherry trees, or fruit trees of any kind, and in a few years, comparatively, the place would verge upon the hideous—saying nothing of the premium on truancy. Near the city of Boston I know of no fruit trees planted by the road-side Every one readily sees the impropriety of it, as orchards and gardens need close watching, and it is nearly impossible to keep even horse-chestnut trees free from the stones and clubs of boys

Far back in the interior, where the population is very sparse, and where forest trees are seen on every hand, it might be safe to plant fruit trees on the highway—thus giving more numerous tokens of the progress of civilization, and affording to the traveller a happy contrast with the surrounding scenery. In such cases cherry trees would be the most ornamental, but late apple trees would be the most profitable. Wild districts, however, are rare in Massachusetts, though they may not be in Western New York; but in both places they must be growing rarer.

Our native forest trees are beautiful, and merit preservation. They should have a place around our dwellings and along our highways. The Elm, the Maple, the Tulip tree, the Pine and Hemlock, and

"Lord of the woods, the long-surviving Oak,"

are not the least deserving objects for street-planting. Many foreign trees, also, should not be neglected in the highway. Forest trees generally grow with vigor, furnish ample shade, while the blasts of a century will not mar their beauty.

In a thickly settled country, I am of the opinion that good taste would sooner permit ornamental trees to intrude upon the garden, rather than fruit trees upon the street. If we had no valuable forest trees, the case would be far different. Our forests are rapidly disappearing, to make room for the plow, and in a few years their noble representatives will seldom be seen if not in our highways and around our public buildings.

The construction of a highway is a permanent thing, to which we set no limit; and the durability of the trees set upon its borders should be in harmony with this idea—trees that will not perish in half a century, but move their tops in unabated vigor when the hand that planted them shall have been transformed into the elements which give them vitality. D. W. Lothrop.

W. Medford, Mass., Aug., 1857.

"SHOULD FARMERS' WIVES BE EDUCATED?"

Indeed they should; and *no man* of a sound and cultivated mind could answer it in the negative. The wives, not only of farmers, but of every other class of men, are the great builders of the nation's character; and its destiny lies within the hands of the wives and mothers, who implant the first seeds in the minds of the embryo men they rear, which must ere long bear good or evil fruits.

They occupy the *most important* station that it is possible for mortals to hold. Keep *woman* in ignorance, and she will rear a race of ignorant, degraded men—a scourge to the country, which *generations* could not remove. On the other hand, educate and refine her, and her influence on all around her—husband, children, friends and neighbors—will not only be pure and holy, but conducive, in the highest degree, to their prosperity and happiness. The station such a woman occupies, as a promoter of the country's prosperity, no language can describe. And *farmer's* wives—the wives of one of the *most useful* classes of society—why should not *they* be educated as well as those of any other class? Their education should indeed be more extended than that of any other class, for her sphere is more extended.

She should understand every branch of housekeeping, for *her* home should be as neatly and tastefully arranged as that of any other individual; and as she has the entire control of the cooking department, is in need of a better knowledge of philosophy chemistry and physiology, than many of her city friends. She should be refined and polite, that her home may be a happy one; for truly, *ignorance* is a most fruitful cause of misery and trouble.

This is a subject on which little can be said without a repetition of ideas, which may be summed up as follows, viz: In a maternal point of view, it is as useless to argue the importance of a good education as it is to discuss the necessity of virtuous and intelligent men in a prosperous community. The "off-scouring" of the land spring from the hovels of ignorance.

She has as many duties to fulfil as a woman of any other class—and *more* than the generality; and no ignorant wife could conduct the multitude of affairs connected with a thrifty farmer's household. As a companion for her husband, who has the means of enjoying life more than any other man, she should be well educated, and refined in her manners—for what man of any mind and heart would want an "*ignoramus*" for a wife? A well stored mind is an inexhaustible source of true happiness, while ignorance is continually leading astray; and miserable must that farmer be, who has a "*blockhead*" for a wife!

Salem, Ohio. David Street.

IS IT PROPER FOR LADIES TO ASSIST IN THE GARDEN?

Many in our day, and age of the world, have arrived at the determination that it is out of the latitude of a *lady* to help in the garden. Although they may have condescended to assist in the should-be delightful household duties, yet to go into the garden and cultivate vegetables is entirely beneath their dignity.

And why is this so? Surely it is a very healthy occupation; far more so than work which is prepared within doors. Is it because they fear they will perform more than their share of the work? But this should not be, for in the beginning God created woman as a helpmeet for man—a sharer of all his joys and sorrows; and shame on the woman, who, when the man is forced to neglect the garden, will let it run to ruin. But this is equally true with the man who does not deign to assist when convenient in the house; and there is as much accordingly in this sphere for him to do, as there is, on the other hand, for the lady And the man who despises the woman who is above working in the garden or milking the cows, &c., should, before expressing his dislike, first examine his own habits, and see if there is not as large a beam in his own eye. Miss S. E. M.

Girard, Erie Co., Pa.

Horticultural Department.

MEETING OF THE WESTERN NEW-YORK FRUIT GROWERS' ASSOCIATION.

The exhibition and meeting of this Society was held in this city September 18th and 19th. There was a fine show of fruits and a fair attendance of fruit growers. The following subjects were recommended for discussion, and adopted:

1. Peaches. Can the cultivation of the Peach extensively for market be recommended as profitable? If profitable, what varieties can be recommended?

2. What is the cause of the cracking of the Pear—and of the leaf blight (so called)? What varieties among our best Pears are most subject to it, and what most exempt?

3. What are the comparative advantages of raising nursery trees on fresh soil, previously unoccupied with the same, over cultivating them on soil which has been repeatedly occupied with such trees, and the fertility maintained by heavy manuring?

4. Can the Pear on Quince stock be advantageously cultivated on a large scale for market?

5. What form of tree is best for the standard Pear in orchards?

6. Can the Raspberry, Currant and Gooseberry be largely cultivated profitably for market, and in what way? What product per acre could be obtained? In what way prepared for market? What varieties are best?

7. What are the best modes of preserving fruit in cans, jars or bottles, and what sorts are best for the purpose?

8. What age is best for planting Apples and Pears from nurseries to orchards to insure the best success?

9. Can land naturally wet be made suitable for raising fruit? And how? And at what expense per acre?

10. Each member is requested to hand in, in the form of a ballot, a list of twelve best Apples for marketing exclusively—and twelve best Pears and six best Peaches—each member to append his name to his list.

FIRST DAY—*Morning Session.*

H. P. NORTON, of Brockport, in the Chair.

The subject first taken up for discussion was the leaf blight, and cracking of Pears.

H. E. HOOKER, of Rochester, remarked that some varieties were much more subject to crack than others, under precisely the same circumstances.

W. P. TOWNSEND, of Lockport, said that up to the 6th of the present month, (Sept.) the season had been favorable to the growth and healthy development of both fruit and trees. At that time a change occurred in the atmosphere, and much of the time since, it has been close and damp, causing mildew on the grapes. On the evening of the 6th inst. the leaves of the Beurre Diel, on his grounds, turned black, and soon after, those of the Virgalieu and Oswego Beurre, and the fruit commenced to crack. Other varieties growing in the same rows with these, not affected.

P. BARRY, of Rochester, stated that the Virgalieu was cracking this year on the grounds of Mr. YEOMANS, of Walworth, and in the town of Greece, and in other localities of Western New York. He would, however, state, on the authority of a gentleman present, that Mr. YEOMANS had sold some of these very trees to his neighbors which were entirely free from leaf blight, and the fruit from cracking. He believed the leaf blight and cracking to be caused by the same or analagous causes, and that to be fungi or a fungus. Some varieties suffered badly some seasons, and again others were attacked that had never been before. Why this was, no one had been able to tell, any more than they had why these phenomena occurred at all.

Mr. SMITH, of Geneva, thought it might be an insect, as it appears to spread most rapidly after rain, succeeded by warm weather, which is favorable to the propagation of insects.

Mr. HOOKER said that if he remembered right, the soil of Mr. YEOMANS, in which these trees grow, is a heavy clay, with a hard pan, which has been underdrained, but is not now a good pear soil, and that none but a naturally well drained soil would ever be found to be favorable to a healthy condition of the Pear.

Mr. BARRY would state the Duchesse d'Angouleme as in fine condition on Mr. YEOMANS' grounds.

J. J. THOMAS, of United Springs, had made many observations in reference to this subject, but the more he made the less he thought he knew respecting it; had examined it with powerful microscopes, and believed it to be a fungus. The leaf blight and cracking usually accompany each other, but not always, as sometimes there is leaf blight without cracking of the fruit. A small Virgalieu Pear tree, planted some years since, produced its first crop badly cracked, but ever after it has been fine, and the cause cannot therefore be, as some have thought, the exhaustion of the soil. Thrifty varieties are apt to be exempt, such as Beurre d'Amalia, Osband's Summer, Bartlett, &c. On the contrary, Oswego Beurre sometimes cracked. Ananas d'Ete seldom cracks. The whole subject was enshrouded in darkness.

Mr. SMITH, of Geneva, would enquire where the fungus commences its growth?

Mr. THOMAS had examined the rust of wheat, and was satisfied that it was propagated by passing through the sap pores, and that the fungus under consideration was produced in a similar manner, and largely increased by budding and grafting, the seed being much smaller than the pores of the wood.

W. P. TOWNSEND would state that he had a small bed of pear seedlings, through which ran a furrow which was wet, and he noticed that the blight attacked only those stocks standing in the furrow, distinctly marking the water course.

Mr. THOMAS said that several years since many attempts were made by numerous parties, among whom were Mr. HOVEY, of Boston, and Mr. ZERA BURR, of Perrinton, to eradicate this disease by the use of various solutions, but all had proved unsuccessful.

Mr. BARRY thought that the practical question was, how this disease was to be avoided? He knew of no way. If any varieties are known to be particularly liable to it, they should not be planted.

The CHAIR would ask if there was any difference in the cracking of the Virgalieu on the Quince and on the Pear stock?

Mr. BERKMANS, of New Jersey, had found that Virgalieu trees that had been subject to this disease, when grafted with other varieties became exempt. With him, Glout Morceau and Vicar of Winkfield had been most apt to blight. For twenty years he had attended to this subject, but the result was unsatisfactory. Cracking was most common in wet seasons. Beurre Diel, Chaumontel, and Stevens' Genesee all cracked badly.

The next subject taken up was that in reference to rearing nursery trees on fresh soils previously unoccupied with them.

Mr. DOWNING said that he had had no experience in raising trees on new soils, but knew that very good trees could be raised on old soils.

H. E. HOOKER had seen just as good trees raised on old soils as ever were raised, but believed in a rotation of different sorts of trees.

Mr. THOMAS said that there was much difference in soils; some being able to produce good crops for a long time with good cultivation, while others never were profitable.

Mr. BARRY supposed that no one doubted that trees may be grown a century on the same soil; but the question is, are these trees as good as on new land? His experience is in favor of new land.—The roots of the trees were more fibrous, and consequently the trees could be more easily transplanted; believed that many diseases of trees were owing to vicious cultivation and bad manures.

Mr. HOOKER thought that all the soil was pretty old, and that with proper rotation it could be always cultivated.

Mr. BERKMANS had cropped land in France with trees, and then followed them with potatoes and other root crops, and dressed with potash, and then again raised good crops of trees. This had been done several times in succession.

Mr. TOWNSEND thought that a succession of varieties was desirable, as it is the method pointed out by Nature.

Mr. LANGWORTHY thought that there was a principle in new soils peculiar to itself, and which was not in manures, and could not be applied to old soils.

Mr. SMITH, of Geneva, was in favor of new soils, and thought it impossible to grow good trees twice in succession on the same soil, even with heavy manuring. After a crop of Pear trees he had planted Peach trees, which grew feebly the first season, and were manured the winter following, (last winter) and now were only about two-thirds average size.

The next question taken up was, can the Pear or Quince stock be advantageously cultivated on a large scale for market?

Mr. THOMAS would make a report of an estimate he had made of a quantity of Virgalieu trees on ELLWANGER & BARRY'S grounds, occupying about one half acre of land. The trees were six years from the bud, and now have on them at least sixty bushels of Pears. He thought that the Virgalieu should not be planted largely for market, but would prefer Louise Bonne de Jersey and Duchesse d'Angouleme. The great cause of failure among tree planters is the want of discrimination in reference to the varieties which they plant. Much information is yet also needed on this point.

Mr. YEOMANS, of Walworth, Wayne Co., had an orchard of Pears on Quinces of three thousand trees. Those of Louise Bonne and Duchesse d'Angouleme produce from one half to one bushel per tree, but the Virgalieus are badly cracked.

Evening Session.

President THOMAS in the Chair.

The question taken up for this evening was, what form of tree is best for the Standard Pear in orchards?

Mr. BERKMANS thought the limbs should be kept short, and the tree trimmed into the pyramidal form, for the first ten or twelve years, and then allowed to take its own course. The pyramidal form is the one found by experience to be the most practical one. If the limbs are allowed to grow long, the weight of the fruit is apt to break them down. Pear trees are more apt to straggle than Apples. Prof. MAPES' trees are allowed to straggle, and they split up.

Mr. BARRY remarked that there were several considerations in reference to the forms of trees, among the most important of which are the liability of their being affected by high winds, the gathering of the fruit, and the safety of the trunk of the tree. The Standard tree is usually trained with a trunk from four to six feet high. This form is not so well suited to the Pear as to the Apple. The sun in winter is apt to affect the bark of the trunk and seriously injure the tree. Trees trained in the pyramidal form are less affected by high winds, and the fruit can be much more easily gathered; and trees growing in open spaces naturally assume the pyramidal form. He had also found that trees trained in this manner bore earlier than tall ones, and were not liable to as many accidents.

Mr. HOOKER agreed in the main with Mr. BARRY, but thought that trees should be trimmed high enough to cultivate easily about them, and that the shade afforded by the limbs was sufficient to protect the trunk from injury by the sun.

Mr. AINSWORTH, of West Bloomfield, is cultivating trees in both the forms mentioned by the previous speakers, and also in a middle form. Some with limbs commencing five feet from the ground, others about two and a half feet, and lastly, branching from the ground. The trees are now all in bearing; prefers the middle form, because the trees are more easily cultivated. The low limbs protect the trunks from the rays of the sun, and also from reflection from the snow. When trees are injured by the sun, it is always on the north side, and on the under side of the limbs. A year ago last winter his trees received the most injury in this way; and at the same time the faces and hands of the men at work on his grounds were severely blistered by the reflected rays of the sun from the snow. Those of his trees that at that time were protected by the low limbs were not injured. The trees trained four and a half or five feet high he found to be much more affected by high winds. He did not like the pyramidal form, but preferred to keep the head down and make the limbs throw out. Had found the lowest trimmed to bear the earliest.

Mr. BERKMANS had seen one tree in France branched low, so that the limbs on every side braced into the ground and acted as stanchions, so that it was impossible for any wind to move or affect it.

Mr. TOWNSEND'S method was similar to the middle course adopted by Mr. AINSWORTH.

Mr. FISH plants stocky trees, and keeps them trained low.

Mr. BARRY said there was no difficulty in cultiva-

ting clean, underneath low trees at least close enough for all useful purposes. Weeds do not grow when the limbs are low, and it is an injury to the roots of the trees to plow close; thought low training a great reformation. Western people seemed now to understand this point, and all planted low headed trees.

The PRESIDENT remarked that he had found that the extent of the roots of Pear trees corresponded to their height, and a tree about eight feet high, for instance, had a breadth of roots of about eight feet, or four feet on each side, and the trees should not be cultivated so close as to much disturb these roots. He did not regard high trained trees in the light of ST. PIERRE, who when walking through a grove with a friend, remarked that he thought that it was a beneficent dispensation of Providence that the trees in the grove grew just high enough for people to walk under conveniently, without thinking that the lower branches had been broken off by cattle running underneath, and had decayed and fallen off by being too close.

The next subject discussed was that of the Proper Age for Transplanting Apples and Pears into Orchards.

Mr. MAXWELL stated that nine years ago a neighbor of his, planted some large apple trees, which grew well, and that four or five days after he (Mr. MAXWELL) planted some little whips of the same kind, and in four years they were the largest trees, and bore the most fruit.

C. P. BISSELL, five years ago, planted some large cherry trees, which have done very well; but at the same time he planted some large apple trees and some whips, and the small ones have made the largest trees, and are bearing good crops for their age, while the other trees only show now and then an apple.

Mr. AINSWORTH said a neighbor, some years since, bought a wagon load of large apple trees, and planted them and manured them well; but they never throve, and have all died out. A few years after the same person planted a quantity of quite small trees, and they have made a fine orchard. Another neighbor, a few years since, bought some very small trees, which have made large, fine trees, fifteen feet high; while a lot of large trees, planted at the same time by another neighbor, have not grown six inches. Large trees have large roots, and when they are transplanted these roots are cut off, and, consequently, the tree is starved to death; on the contrary, small trees have a quantity of fibrous roots, which are nearly all removed when they are transplanted, and the tree scarcely feels the shock.

Mr. BARRY said this subject was a very important one—that it was the first thing usually spoken of by purchasers of trees—they must have large trees, and, in most of these cases, large means *quite* large. He had found that two years was the most favorable time for planting pears, cherries and plums, and three years for apple trees. There are exceptional cases, where large trees are moved only a short distance.

Mr. HOOKER coincided with the remarks of Mr. BARRY.

Mr. BARRY would not cut back yearlings nor two year old trees when transplanted, but would let them remain a year, and then cut back severely.

Mr. AINSWORTH agreed with Mr. BARRY. His advice was not to cut back too far, as the buds at the base of the shoots are small, and will make but a feeble growth.

Mr. HOAG cut back severely some small trees when he planted them, and the first two or three years they made no growth, but have since done well.

Adjourned.

SECOND DAY.—*Morning Session.*

W. P. TOWNSEND in the Chair.

The subject first discussed this morning was in relation to the Profitable Culture of the Small Fruits.

Raspberries.—Mr. DOWNING stated that the Hudson River Antwerp was found most profitable in his section. It is cultivated there in fields, like corn.

Mr. HOOKER sold this year, off from one-tenth of an acre of the Hudson River Antwerp, to the amount of $14 80, making the average for an acre about $140. His neighbor, Mr. BISSELL, found the profits somewhat larger.

Mr. SMITH, of Geneva, said that a party near Geneva realized $200 per acre from the common Black Cap.

Mr. HOAG preferred Brinckle's Orange. It is a delicious fruit, bears abundantly and long after others have ceased, yet it will not bear carriage as well as the Hudson River Antwerp. It is, however, much hardier than the Hudson River Antwerp, which killed down very badly by the cold.

Mr. ELLWANGER remarked that Brinckle's Orange did well with him, and that he heard very favorable reports from it at the West.

Mr. BARRY thought that the raspberry could, without doubt, be cultivated with profit; but can market be found for it, if cultivated largely? If sufficient market was at hand, it would be found profitable, even at six cents per quart.

Mr. HOOKER remarked that it was impossible to transport raspberries many miles, either in wagons or cars. He preferred, for his own use, the Fastolf, but thought the Hudson River Antwerp preferable for marketing; and another advantage this variety has is that the berries are all perfect, even to the smallest and last.

N. DRAPER, of Rochester, planted five kinds of raspberries about thirty years ago, but found only two kinds worth preserving, which were the White and Red Antwerp. These bushes, for most of the time, stood under peach trees, and were cut down last spring. The product was usually about fifteen bushels for sixty square rods. They were never manured, but had clean cultivation. Besides what he used in his own family, he sold annually about twenty-five dollars' worth. They could not be profitably transported ten miles.

Mr. HOOKER said that, although raspberries did not want to be starved, yet he had found high manuring to be unproductive.

Mr. DOWNING remarked that where they are cultivated on the Hudson for the New York market, they are carried by land only from one to four miles, and then sent down the river in barges.

Mr. SMITH had sent to Buffalo and Syracuse quite a quantity in two quart baskets. He thought good cultivation necessary, and that the plant preferred a moist soil. He laid the canes down in the fall, and covered only the tops, which he found sufficient.

New Rochelle Blackberry.—C. P. BISSELL, of Rochester, had an acre in cultivation for market. It bears profusely. Must be thoroughly ripe to have a good flavor. The distance he planted was six feet by four, but thought it would be better to

plant eight feet by four. He trained it on wire trellises. It should be cut back in the spring to five feet, and the laterals shortened in. The laterals only bear, and they are apt to break if not shortened in.

Mr. HOOKER said that Mr. CARPENTER advises wire trellises, and that the old canes should be trained on the lowest wires, and the new canes trained up.

Mr. PENFIELD, of Lockport, found that the berries are apt to drop off before they are fairly ripe.

Mr. HOAG planted half an acre a year ago last spring. They were set six feet by four, but they were too close; eight or ten feet by four would be better. He had some fine fruit this year. Recommended cutting back, as the plants bear better. The berries should hang a week after turning black. It is very prolific.

Mr. BISSELL said that this plant fills a vacancy which has long been felt—it comes in between the raspberry and the commencement of the peach season, and when there is a scarcity of fruit. With him, each plant bears from two hundred to four hundred berries.

Mr. HOAG said that his berries were not yet all ripe, but he found them good, when eaten with plenty of sugar.

Mr. FROST stated that he had found great difficulty in telling when they were ripe; that those who cultivated largely about New York, placed straw on the ground between the bushes, and, by jarring the plants, the berries fell on to the straw, and were then gathered.

Mr. SCOTT remarked that when it will fall it is too ripe—it is too sweet, and too soft to be carried to market.

Mr. BARRY thought the Dorchester, or improved High Bush blackberry, a very superior sort, and would advise it in preference to the New Rochelle.

Mr. DOWNING thought the New Rochelle much the best for market, but the Dorchester is the highest flavored, and Newman's Thornless variety had a better flavor than either.

Mr. HOAG said that the New Rochelle made excellent wine.

The subject of Preserving Fruits elicited quite a number of remarks, but nothing decidedly new was brought out, except by

Dr. BRISTOL, of Dansville, who had found much difficulty in preserving fruit so that it would not mould on the top, where there was always a vacancy, caused by the shrinkage during cooling. His method to obviate it is briefly this: He uses a glass bottle, with a cork perforated to admit of a metallic tube, the upper end of which also passes through another cork, fitting into a small vial, which is filled with syrup. The jar is filled with the fruit, and undergoes the usual method of standing in boiling water to exclude the air, when the cork and apparatus just described are applied, and, as the contents of the vessel shrink as they cool, the syrup from the vial runs in, and keeps the jar full. When it is quite cool, the tube is cut with a pair of sharp shears, and, if nicely done, it is quite tight. A little wax on the end of the tube and over the cork completes the operation.

The ballot for a list of the 12 best varieties of apples, and 12 best pears, and 6 best peaches, for market purposes, resulted as follows:

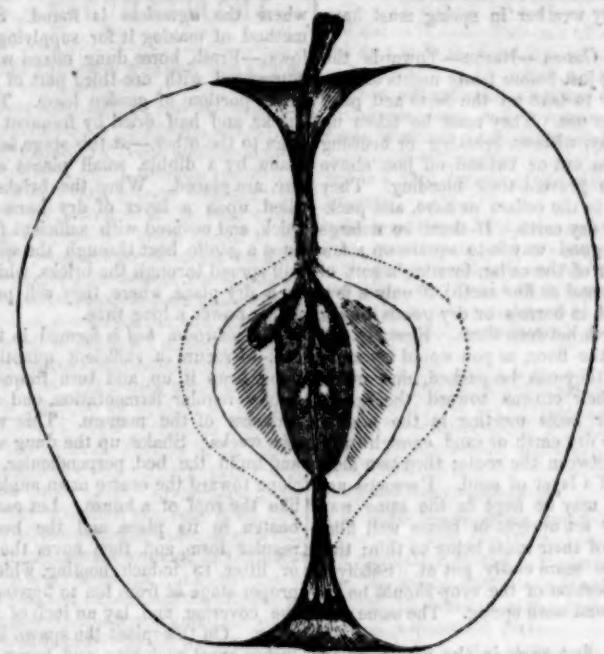
APPLES.—Out of 19 votes cast, the Rhode Island Greening received 19; Baldwin, 18; Roxbury Russett, 17; Red Astracan, 14; Talman Sweet and King of Tompkins Co., each, 13; Northern Spy and Esopus Spitzenburg, each, 12; Fall Pippin, 9; Sweet Bough, 8; Primate and Cayuga Red Streak (20 oz.), each, 7; Golden Sweet, Gravenstein, and Early Harvest, each, 6; Golden Russett and Yellow Bellflower, each, 4; Swaar, Jonathan, Rambo, and Seek-no-further, each, 3; Cooper's Redling, Duchess of Oldenburgh, Peck's Pleasant, Porter, American Summer Pearmain, and Vandevere, each, 2; Colvert, Early Joe, Early Summer, Hawley, Prince's Harvest, Fall Orange, Sops of Wine, Hill's Sweeting, Green Sweet, Autumn Strawberry, Golden Pippin, Red Canada, Benoin, Melon, Pound Sweet, Wagener, Jersey Sweet, Newtown Pippin, Ribston Pippin, Mammoth Pippin, Spicy Sweet, Hubbardston Nonsuch, Large Yellow Bough, and Maiden's Blush, each, 1.

PEARS.—Out of 21 votes cast, the Bartlett received 19; the Louise Bonne de Jersey and the Duchesse d'Angouleme, each, 18; White Doyenne, 17; Easter Beurre and Lawrence, each, 16; Vicar of Winkfield, 13; Seckel, 12; Flemish Beauty, 11; Beurre d'Anjou, 9; Beurre Diel and Tyson, each, 8; Sheldon, 6; Buffam and Bell Lucrative, each, 5; Glout Morceau, Beurre Superfine, Urbaniste, Bloodgood, Brandywine, and Beurre Giffard, each, 2; Theodore Van Mons, Beurre Clairgeau, Beurre Bosc, Onondaga, Rostiezer, Stevens' Genesee, Osband's Summer, and Ananas d'Ete, each, 2; Howell, Ontario, Dearborn's Seedling, Beurre d'Amalis, Gris d'Hiver, Brown's Autumn, Comstock's Beauty, Comstock's Mammoth, Winter Nelis, Jalouse de Fontenay, Doyenne Boussoch, Nouveau Poiteau, and Bergamotte Lucrative, each, 1.

PEACHES.—Out of 15 votes cast, Crawford's Early received 15; Crawford's Late, 13; Early York (serrate), 11; Old Mixon Free, 10; Morris' White, 5; Coolidges Favorite and Large Early York, each, 4; Honest John, 3; Old Mixon Cling, White Imperial, Red Cheek Melocoton, Durock Freestone, George IV., Walter's Early, and Early Barnard, each, 2; Ward's Late Free, Jacques Rareripe, Early Tillotson, Lemon Cling, and Columbia, each, 1.

THE ORTLEY APPLE.

As a general rule, varieties of fruit are best adapted to the locality in which they originate. The Ortley apple seems to be an exception. It is a native of New Jersey, but does not succeed well there, or in the Eastern States, or in New York; but at the West, according to ELLIOTT, on strong, rich soils, "it proves one of the hardiest, most productive, profitable, as well as best known varieties. Mr. ERNST, of Cincinnati, stated at the last meeting of the American Pomological Society, that the Ortley "was a great favorite at the West, where it is cultivated mostly under the name of White Bellefleur." In New York, according to Mr. SAUL, of Newburgh, "it is a miserably mean tree and a poor bearer." Mr. BARRY, of Rochester, N. Y., said "it was fine at the West, but not in this locality." When grown on strong, rich soils at the West, according to ELLIOTT, the fruit is very much larger than when grown at the East. "Skin, smooth; form, oblong, oval, sometimes roundish conical; color, pale yellowish at



THE ORTLEY APPLE.

the North; South it becomes a rich yellow, with specks of dark red, and a vermillion tinge surrounding when exposed to sun; stem, varying from short and stout to long and slender; *cavity*, deep, narrow; *calyx*, small, closed; *basin*, furrowed or plaited from the surrounding angles or ribs that are often apparent in the fruit; *flesh*, yellowish white, tender, crisp, sprightly, mild acid; *core*, large, open; *seeds*, abundant, loose in the capsules. *Season*, January to April."

HORTICULTURAL OPERATIONS FOR OCTOBER.

CAULIFLOWERS.—From the cauliflower and cabbage seed, sown in September, will, by the first of October, be produced some nice plants, for early spring use. About the first week of the month select a nice sheltered and dry piece of ground, some elevated border on the south side of a board fence or wall, is the best situation, with some protection at a short distance on the southwest, as a hedge or buildings, that will break off the southwest winds in the winter—and yet fully exposed to the sun. Mark out the bed six feet wide and twenty or thirty feet long, according to the number of plants wanted. A bed thirty feet long will hold about a hundred. Spread over the surface four to six inches of good rotten manure, and spade it in eighteen inches deep. Now drive down some stakes at the corners, (pieces of 2x4 scantling are as good as anything,) leaving those in front one foot out of the ground, and those at back eighteen inches. This gives a fall to the water on the glass of six inches in six feet. Set more stakes along the sides, if necessary, according to the length of the boards. Now nail on old boards or thick plank, making it as tight as possible, to exclude cold wind, and frost, and mice. Now throw up a bank of earth eighteen inches thick, and to the top of the boards all round; make the bank solid, and pat it smooth, to throw off the rain. This frame is to be covered with close boards, or shutters, or what is still better, glass sashes. In a week or ten days as soon as the bed has settled, it will be time to plant. Take up the best plants carefully, with a ball of earth, and without breaking their roots, if possible, and plant in the new bed, eighteen inches apart each way, up to their leaves, first breaking off any decayed leaves that may be on them; press the earth firmly to their roots with the hands, and give a good watering if dry weather, and shade a little at first if necessary. Between the rows may be planted some hardy kind of lettuce, as Green Hammersmith or Brown Dutch, &c. Those of the tender varieties are apt to damp. They will come into use during the winter and spring, before the cauliflowers spread much. Cover up in rainy and stormy days and cold nights, but give air on all mild and favorable opportunities. As soon as the weather begins to set in severely, the whole frame must be covered over eighteen or twenty inches thick with littery straw, and kept on night and day in very severe weather. In bright and mild days the covering must be taken off, and air given, so as to keep them hardy and prevent their spindling up and damping off. All decayed leaves must be picked off, and mice destroyed, should any appear. These will come in for use in the spring and early summer, and may be the finest of the season. In spring, in mild weather, the covering must be taken wholly off, and put on in cold nights. Some Early York cabbage may be managed in the same way, only planted one foot apart each way. Some young plants may also be kept in this way for planting out in the open ground, for the second early summer's crop. They must be kept dry

all winter, but in dry weather in spring must have plenty of water.

Wintering the Crops.—Beets.—Towards the end of the month, or just before frosty nights are expected, will be time to take up the beets and pack them away for winter use. They must be taken up carefully, in a dry day, without breaking or bruising them, and their tops cut or twisted off just above the crown, so as to prevent their bleeding. They must then be taken to the cellars or cave, and packed away in sand or dry earth. If there be a large quantity of them, a good way is to square up a few boards in the corner of the cellar, forming a sort of bin, to keep up the sand or fine earth; if only a few, they may be packed in barrels or dry goods boxes, with the sand or earth between them. First lay two layers of roots on the floor, as you would lay stove wood, as close as they can be packed, close up to the boards, with their crowns toward the boards and wall, and their heels meeting in the middle. Then spread on fine dry earth or sand enough to fill up all the spaces between the roots; then two more layers of roots and a layer of sand. Parsneps and carrots, and salsify may be kept in the same way. But salsify is better set upright in boxes well filled with sand, because of their roots being so thin; they keep better and are more easily got at. Salsify is very hardy, and a portion of the crop should be left out in the open ground until spring. The same with parsneps.

Onions.—By the first week in the month, onions will be all ripe and their tops dead. They should be pulled up and left on the ground a day or two to dry, if fine weather; then carried to a dry, airy room or loft, and spread out to dry still more, that they may be thoroughly ripened, or they will not keep. In wet days, when you can only work in doors, their tops should be braided together, forming a rope of onions two or three feet long, and hung up in a dry, airy place, where it will not freeze.

Proceed carefully with the earthing of the Celery, as directed. Keep the leaves straight and the earth out of their hearts. Earth up about three or four inches at a time, and at intervals of two or three weeks. Do the earthing when the leaves are dry and clean, and the earth in nice working order.

Josiah Salter.

MUSHROOM CULTURE.

Loudon, an *authority* upon all subjects of this character, describes the mushroom (*Agaricus compestris*) cultivated in gardens for edible purposes, as "a well known native vegetable, springing up in open pastures in August and September. It is most readily distinguished, when of middle size, by its fine pink or flesh-colored gills and pleasant smell. In a more advanced stage, the gills become of chocolate color, and it is then more apt to be confounded with other kinds of dubious qualities; but that species which more nearly resembles it, is slimy to the touch, and destitute of the fine odor, having rather a disagreeable smell; further, the noxious kind grows in woods, while the true mushroom springs up chiefly in open pastures, and should be gathered only in such places."

The *spawn* or seed by which the mushroom is propagated, resembles pieces of fine white thread, and is collected in old pastures, or other places where the *agaricus* is found. Seedsmen have a method of making it for supplying gardeners as follows:—Fresh horse dung mixed with short litter is composted with one-third part of cow dung, and a small portion of garden loam. This is cut up into bricks, and half dried by frequent turning from one edge to the other,—at this stage, in a couple of holes made by a dibble, small pieces of spawn, walnut-size, are placed. When the bricks are dry, they are piled upon a layer of dry horse dung, six inches thick, and covered with sufficient fresh dung to produce a gentle heat through the whole. The spawn will spread through the bricks, which may be stored in a dry place, where they will preserve their vegetative power a long time.

A mushroom *bed* is formed in the following manner:—Procure a sufficient quantity of good horse dung, heap it up and turn frequently, in order to induce regular fermentation, and to get rid of the rankness of the manure. This will require about two weeks. Shake up the dung well with the fork and build the bed, perpendicular, a foot high; then slope toward the centre at an angle of thirty degrees, like the roof of a house. Let each forkful be well beaten in its place, and the bed be of neat and regular form, and then cover the whole with straw or litter to induce heating, which will be at the proper stage at from ten to fourteen days. Remove the covering and lay an inch of fine loam over the dung. On this plant the spawn in small pieces, six inches apart each way, and cover with another inch of loam. Beat smooth with the spade, and replace the covering of straw. Protect the bed, if in the open air, from extremes of heat and cold, drouth and moisture, keeping the temperature at about 60°. If the mould appears too dry, sprinkle with tepid water mornings, leaving the covering off for about an hour after the application.

Good beds, rightly managed, will produce young mushrooms in six weeks' time, but it is often longer. Sometimes extra heat and moisture will bring on a good growth; again, too great heat and moisture destroys the vegetative power of the spawn. Proper care will generally secure a fine supply of this delicious vegetable fungus. In gathering, take up to the bottom, and fill the hole with earth. If the stump is left it becomes a nursery of maggots, very injurious to the succeeding growth. Perhaps some other correspondent will give C. of C. W. the information he desires in regard to obtaining spawn, and its price. We here furnish full directions for its culture, and some notice of the original sources whence it is obtained.

P. A. S.

CULTIVATION OF ONIONS.

Messrs. Editors:—I have raised 38 bushels of onions on 8 rods of ground, some of the onions measuring 16¾ inches in circumference. My method of culture is as follows:—I plow the ground deep, in the fall, and manure very high. In the spring plow the ground again, and then harrow and rake the ground smooth. Gravelly ground is the best. I rake off all of the largest stones; then sow in drills, about 14 inches apart; sow quite thick, and thin out. They should be weeded as soon as they are big enough. I think that the first of April is the best time for sowing the seed.

Nathan Kenyon.

Little Genesee, N. Y.

Ladies' Department.

HOW SHALL WE SPEND OUR WINTER EVENINGS?

The question, how shall farmers and their families spend their winter evenings profitably, and at the same time pleasantly? has often been asked, and many ways have been proposed, and I presume resorted to in various places, to suit their several localities; but I will tell you how we managed it the past winter. At a social singing party at the house of one of our deacons, our pastor proposed to us to get up a literary society of some sort, for mental, moral, and social improvement. After some discussion, a committee was chosen to draft a constitution and give us a name. It was decided to call it a Polytechnic Society; its officers were President, Secretary, Treasurer, and Editor and Editress. Ten cents constituted any one a member; the funds to be applied to the purchase of paper, ink, and other incidental expenses. To meet once in two weeks. Officers to be chosen by ballot, and changed at every meeting, thus giving every one a chance for an *office*. Besides the paper, which of course was a written one, and filled from seven to ten sheets of foolscap, the contents of which were, with very few exceptions, original, and of great variety, we had two original essays. At the close of the meeting, the President announced the officers for the ensuing meeting, and himself appointed the essayists; the choice of subject left to the writers.

We met round, as the schoolmasters say, or from house to house, as we were invited. And this reminds me of a peculiar feature of Western life—the capabilities of a small house to accommodate a large company. Our housewives seem to have the knack of making room; for a common observer would hardly think some of our houses large enough to accommodate an ordinary sized family, yet from fifty to sixty persons were comfortably seated, for that was our usual number. New Years afternoon we met at the house of our pastor, with such donations as we had the power to offer, and enjoyed an excellent and bountiful repast prepared by the ladies, and in the evening had our regular meeting.

Perhaps some will say, well, this only took up one evening in two weeks, but it must be remembered that the articles for the paper occupied all the spare time of the members during the two weeks, and the editors had their hands full, I assure you. At any rate, notwithstanding the severity of the winter, we always had a full house, and the winter passed rapidly away; and when the spring came at last, with its usual toils and cares, and we were obliged to adjourn till September, we all felt sorry to give up our Polytechnic; for though it is true the *arts* and *sciences* had not very much advanced under our supervision, we felt that our minds had been improved, and we had become acquainted with each others habits of thought, which years of common intercourse would never have unfolded. Now if any of your subscribers have found a better way, let them name it, and we will try it; if not, let them go and do likewise.

VIOLA.

Clay, Washington Co., Iowa, July 20, 1857.

To Destroy Crickets.—Put Scotch snuff upon the hole where they come out.

ORIGINAL DOMESTIC RECEIPTS.

Curing Ham.—Rub salt all over them as soon as cut and laid on a table; the next day brush it off and pack in a cask; put on a pickle made as follows: 1 quart salt to 1 gallon water; to 6 gallons water 1 gallon molasses and 3 ounces saltpetre. Let the hams remain in six or eight weeks, according to size. Smoke to suit, and pack away in salt in a cask, and put in a cool dry place, and they will keep good all summer.

Oyster Soup.—To one quart of oysters with their juice, put two quarts of cold water, half a pint of milk, and a heaping spoonful of salt; let them boil one minute; skim out the oysters; add half a tea cup of crackers rolled fine, half a tea cup of butter, and a little pepper; let it boil again; then pour over the oysters.

Extempore Buckwheat Cakes.—Three pints buckwheat flour; one tea spoonful carbonate of soda, dissolved in water enough to make a batter with the flour. When mixed, add a tea spoonful of tartaric acid, dissolved in a few spopnfuls of hot water. Stir it in, and bake immediately.

Ginger Snaps.—One cup molasses; one half cup sugar; one half cup butter; one half cup warm water, the butter melted in it; two table spoons ginger; one tea spoon saleratus. Knead it well with flour enough to make it stiff. Cut it into round cakes; bake in a moderate oven.

Baked Corn Meal Pudding.—To seven heaping table spoonsful Indian meal add one quart boiling milk, one cup molasses, a little salt and butter. Stir all well together, and just as it goes into the hot oven, put in a cupful of cold water or milk. Bake three quarters of an hour.

To Cure Hoarseness.—Take whites of two eggs, and beat them with two spoonsful of white sugar; grate in a little nutmeg; then add a pint of lukewarm water. Stir well, and drink often. Repeat the prescription if necessary, and it will cure the most obstinate case of hoarseness in a short time.

Pickled Cabbage.—Slice red cabbage very thin; put on it a little coarse salt, and let it rest 24 hours to drain; add sliced onions if you like them. Boil four spoonfuls pepper and four of allspice in a quart of vinegar, and pour it over.

Wiping Dishes.—Much time is wasted by housekeepers in wiping their dishes. If properly washed and drained in a dry sink, with a cloth spread on the bottom, they look better than when wiped, besides the economy in saving time and labor.

To Prevent the Smoking of a Lamp.—Soak the wick in strong vinegar, and dry it well before using. It will then burn both sweet and pleasant, giving much satisfaction for the trifling trouble in preparing it.

To Make Cracker Pie.—Take eight water or butter crackers; break in pieces, and pour on them one quart of boiling water; add a tea spoonful of tartaric acid for two pies. Sweeten and spice to the taste.

Cream Pie, Very Rich—Is made by a rich paste for bottom; then a layer of butter, the thickness of a cent; then one of sugar; then one of flour, the same thickness, and fill up with cream.

Editor's Table.

New Advertisements this Month.

Downing's Fruits and Fruit Trees of America.—Wiley & Halsted, New York.

Albany Tile Works.—C. & W. M'Cammon, Albany, N. Y.

Fruit Trees and Fruit.—T. G. Yeomans, Walworth, N. Y.

The Massachusetts White Grape.—B. M. Watson, Plymouth, Mass.

New Rochelle Blackberry.—J. C. Teas, Rayesville, Ind.

Young Men, Form a Book Club.—D. M. Dewey, Rochester, N.Y.

Morgan Horse for Sale.—Elijah Yeomans, Walworth, N. Y.

Blackberry Plants by Mail.—C. P. Bissell, Rochester, N. Y.

Family Sewing Machines.—Grover & Baker, New York.

FAIR OF THE UNITED STATES AGRICULTURAL SOCIETY. The Fifth Annual Fair of the United States Agricultural Society was held at Louisville, Ky., Sept. 1—6. The attendance was very large, the arrangements excellent, and the receipts over $20,000. The show of Short-horns was not large, but there were several excellent herds represented. There was also a fine show of Herefords. Of Devons, Ayrshires and Alderneys few were exhibited, and those few possessed no very particular excellence. There was a small show of Coarse Wooled Sheep of fair quality, and a few Saxons. The show of Pigs was not what might be expected at a National Exhibition in the heart of the great West. Of Poultry there was no show worth the name. The exhibition of Horses was exceedingly good. The show of Fruit, Vegetables, Seeds, and Agricultural Implements was rather meagre. On the whole, the show was decidedly inferior to those at Philadelphia and Boston.

The following awards have been decreed by the Judges for Implements exhibited at Syracuse in July last:

AWARD FOR REAPERS.

First Premium—To C. H. McCormick, of Chicago, Ill., a gold medal and diploma.

Second Premium—To Walter A. Wood, of Hoosick Falls, N. Y., Manny's patent, a silver medal.

Third Premium—To Warder, Brokaw & Child, of Springfield, Ohio, a bronze medal.

Diploma—To Jonathan Haines, of Pekin, Ill., for Illinois Harvester—a diploma.

AWARDS TO COMBINED MACHINES.

First Premium—To Walter A. Wood, of Hoosick Falls, N. Y., Manny's Patent, a gold medal and diploma.

Second Premium—To D. M. Osborne, of Buffalo, N. Y., a silver medal.

Third Premium—To Warder, Brokaw & Child, of Springfield, Ohio, a bronze medal.

HAY OR COTTON PRESS.

First Premium—To Wm. Deering & Co., of Albany, N. Y., for a *Stationary* Parallel Hay Press—a silver medal and diploma.

First Premium—To Wm. Deering & Co., of Albany, N. Y., for a *Portable* Parallel Hay Press—a silver medal and diploma.

GRAIN CRADLES.

First Premium—To H. Robinson, of Lafayette Square, Onta io Co., N. Y.—a bronze medal.

SCYTHE SNATHS.

First Premium—To Frost, Burke & Co., of Springfield, Vt.—a bronze medal.

HAY RAKES.

To John Hatch & Cook, of New York, for superior Hay Rakes—a certificate of merit.

The committee on mowers have not yet agreed upon their verdict.

POTATO ROT.—Potatoes have rotted badly in many parts of the country. DAVID SIGLER, of Lime Mills, Crawford Co., Penn., says potatoes are rotting very badly in that section, especially on those farms where the same seed has been planted for some years. He has fourteen varieties, and there are no signs of rot, except on the old Irish grey, and Pinkeyes. Two years ago he raised 166 bushels of potatoes on 44 square rods of ground, say 382 bushels per acre. He has planted the same ground eight years in succession, and has never been troubled with the rot, except one season. He applies plenty of fine manure on the land in the fall, and plows 14 inches deep, with a double plow. He also applies a large table spoonful of plaster and a tea spoonful of salt in each hill. The soil is a gravelly clay loam, with a hard clay subsoil.

Mr. S. also states that a neighbor of his this spring planted potatoes and corn in alternate rows on seven acres of rich gravelly land, thinking this practice a preventive of the potato rot. The result, however, does not come up to his expectations, as the potatoes *are rotted badly*, and the corn is only half eared.

WILL WHEAT TURN TO CHESS?—Communications on this "vexed question" flow in upon us from all quarters. We can see no good object to be gained by their publication. Not one of them contains anything new—not a single fact that affords positive proof. One gentleman who has no doubt that wheat will turn to chess, urges "the readers of the *Genesee Farmer* to make experiments for themselves, and they will then be convinced." We are in favor of this proposition, but would ask leave to amend, in one particular. Let the object of the experiments be to *turn chess to wheat*. It is a poor rule that will not work both ways. If chess is "degenerated wheat," it is not improbable that good culture would restore it back to its original condition. This is an object worthy the ambition of our readers. One hundred dollars has been offered for a process of turning wheat into chess. We will be one of ten gentlemen to offer *One Thousand Dollars* for a cheap and simple process for turning chess into wheat. Let the experiments be commenced this fall.

UNDERDRAINING CLAY LAND.—In the summer of 1856, Mr. CHARLES MEIKS, of Mercer Co., Penn., underdrained eight acres of clay land as follows: The drains were dug parallel with each other, twenty-seven feet apart, thirty inches deep, and about twelve inches wide. Being unable to procure drain tiles, they carted sandstone to the trenches, broken to a proper size, and filled in about twelve inches, and wherever there was a low spot, they cut a cross drain. After it was finished, it was sown to white wheat, and the average yield this harvest was forty-three bushels per acre, and in weighing, it overran two pounds and a half per bushel. Other farmers in the neighborhood think they have a very good crop if they get twenty bushels per acre, while with many it does not exceed fifteen per acre.

CARBONIC ACID IN THE SOIL.—The air found in the interstices of arable soils has been analyzed by BOUSSINGAULT and LEVY, and found to contain from 22 to 23 times as much carbonic acid as the atmosphere, and when they had been recently moistened, 245 times as much.

LIME AND SULPHUR FOR THE CURCULIO.—In the new edition of DOWNING's Fruits and Fruit Trees of America, just published, it is stated that T. W. LUDLOW, Jr., of Yonkers, N. Y., has been very successful in destroying the plum curculio by syringing the trees after the fall of the blossoms, with a mixture of whitewash and flowers of sulphur, in the proportion of eighteen double handfuls of sulphur to a barrel of tolerably thick whitewash, made of unslacked lime. The sediment of this mixture will answer for a second and third barrel, merely filled with water and well stirred. Apply the mixture three times a week for four weeks.

The trees to which this mixture was applied, have also been free from knots or black warts.

A ROSE ON AN APPLE TREE.—A correspondent of the *Maine Farmer* gives us an account of a natural curiosity which he saw in the garden of Mr. WINSLOW HALL, of letter H. Plantation, Aroostook, on the 21st ult. *This was a full blown rose, upon an apple tree.* The tree blossomed at the usual time, and, when seen by the narrator, had many apples upon it. The blossom was nearly two inches across the surface, perfectly white, and resembled in all respects the common white rose, having as many leaves, and being as large and full otherwise.

LARGE CURRANTS.—The *Deseret News* of August 5, a Mormon paper published at Great Salt Lake City, says: "Br. L. C. HEMENWAY, of the 4th ward, presented us on the 3d inst. with liberal specimens of the black, reddish, and yellow varieties of what are called Mountain Currants. They were the largest, and finest flavored currants we have ever seen; *some of them were larger than ounce billets.* They were raised from seed gathered on the plains east of Laramie."

TO KILL ANGLE WORMS.—Sow salt at the rate of seven bushels to the acre as soon as the frost is out of the ground in the spring, and, my word for it, the salt and worms will make a good dressing of manure. Twenty years ago my garden became so hard from the working of angle worms that I thought I must abandon it; but since the above application it has been free from worms, and as mellow as ground could be. S. N. FRANKLIN.

Ledyard, N. Y.

TO PROTECT CUCUMBER VINES FROM BUGS.—A "farmer's wife" writes us that she has found the following an efficacious method of protecting cucumber vines from bugs: "Take a large barrel, and fill it half full of hen droppings, and then fill it up with water. Let it stand till well soaked. Then take a bunch of broom corn and sprinkle the vines every few days."

PRIZE ESSAYS.—The Premium Essays will be found in this number. The respective writers will please inform us what book or books they wish of the value of $1, and they shall be immediately sent, prepaid, by mail.

Next month we shall offer premiums for more Essays, and hope our readers will name subjects.

BOOK CLUBS.—We call attention to Mr. DEWEY's advertisement relating to Book Clubs. Such organizations are of great use to the young, especially.

HAILSTORMS IN ENGLAND.—Hailstorms have been unusually destructive the past season, not only in many parts of this country, but also in England. A correspondent of the *Mark Lane Express* writes from Reading: "By this storm two or three gentlemen have been completely ruined." One poor fellow said, with tears in his eyes, that "he was beggared, for all his barley was destroyed." Another from Basingstoke states: "I am sorry to say I never witnessed such destruction before in my life. On Wednesday (five days after the storm) I saw 20 cart loads of hailstones, *all whole*; and I heard several people say that over 200 loads were floated down into a corner near Lord ASHBURTON's Park. Such a storm was never before witnessed." A third writes from Alesford: "On the 15th (of August) I measured a drift of ice (I could not call them hailstones) across the turnpike road, and found it *four feet in depth*." A fourth, from Cirencester, says: "There are many persons here that have lost the whole of their crops, *roots and all*; and the ice is lying about the fields now, (Tuesday) although the storm took place last Friday." In Hampshire, the ice on the barley that was uncut, was, in some places, four feet deep.

THICK AND THIN SEEDING.—A correspondent of the *Mark Lane Express* sowed "three acres of the very best land" on his farm with wheat, using one and a half bushels of seed per acre. On ten acres adjoining he sowed three bushels per acre (the usual quantity in his part of England.) The result was that the thin seeding gave 20 bushels and the thick seeding 32 bushels per acre.

LARGE HAIL STONES.—Mr. JOHN L. TALLMAN, of Tecumseh, Mich., writes us that on the 31st of July that vicinity was visited with a hailstorm, which was very destructive to crops. "In some places the smallest hailstones were as large as a hen's egg, and from that up to 14½ inches in circumference."

Notices of New Books, Periodicals, &c.

THE FRUITS AND FRUIT TREES OF AMERICA; or the culture, propagation and management, in the garden and orchard, of fruit trees generally, with descriptions of all the finest varieties of fruit, native and foreign, cultivated in this country. By A. J. DOWNING. Revised and corrected by CHARLES DOWNING. New York: WILEY & HALSTED. 1857.

"DOWNING's Fruits and Fruit Trees" occupies the very first rank among the numerous treatises on American Pomology. Its easy and graceful style; the clear, concise, and yet copious descriptions of fruit, together with the admirable remarks on the preparation of the soil, planting, pruning, and general management of fruit trees, render it one of the most interesting and valuable works ever written on this subject. Since its appearance in 1845, American Horticulture has advanced with gigantic strides. An immense number of new and valuable varieties have been added to our list of fruits, which it was desirable should be noticed in this standard work. A new and enlarged edition was much needed at the present time, and no one was so well fitted for the task as the brother of the lamented author. The work has appeared, and will be hailed with pleasure by all fruit growers. It contains 760 pages, or 166 pages more than the former edition. The classification of fruits has been changed. In the former edition, varieties were classed under the head of Summer, Autumn and

Winter; and a § was affixed to those varieties particularly recommended by the author. In the new edition the classification according to the season is rejected, and all the varieties are arranged under classes 1, 2, and 3, corresponding to the "best," "very good," and "good," of the American Pomological Society. We think it would have been an improvement if the season classification had been retained, and the quality indicated under sub-heads.

The other alterations in the work are confined principally to the lists of fruit, which are judiciously revised and enlarged. The *cultural* portions of the work are almost entirely the same as in the former edition. We observe two changes: The recommendation to apply salt to the soil beneath plum trees to kill the curculio, has been left out. This is well, for in the majority of cases, at least, salt has had no effect on the curculio. The other alteration is, in our opinion, less judicious. In speaking of the cause of failure of many sorts of Pears and Apples in certain parts of the country, the new edition says: "All along the sea coast, where the soil is light, *and has been exhausted, by long cultivation, of lime, potash and phosphates, the inorganic elements absolutely necessary to the production of fine pears*, many varieties that once flourished well are now feeble, and the fruit is often blighted." The italicised words are new. That the idea here hinted at is correct we very much doubt. If the soil was *exhausted* of "lime, potash and phosphates," the trees would not grow at all in it. The trees may be enfeebled and the fruit blighted, owing to a *deficiency* of lime, potash and phosphates, but the same is also true of all the twelve ingredients of plant food, and why these three should have been selected out we cannot understand. If to render some soils fertile, all that is necessary is to supply them with the lime, potash and phosphates, which plants require, the labor and expense of renovating worn out soils would be much less than is generally found to be the case.

A Treatise on the History and Management of Ornamental and Domestic Poultry. By Rev. Edmund Saul Dixon, A. M., Rector of Intwood-with-Keswick, Norfolk, with large additions by J. J. Kerr, M. D. Illustrated with sixty-five original Portraits, engraved expressly for this work. Fourth edition, revised. New York: A. O. Moore, (late Saxton & Co.), 140 Fulton street, New York.

This is one of the very best poultry books, and we are glad to see that a new edition is called for. The work appeared originally as a series of articles in the *Gardeners' Chronicle*. These were collected, and published in book form in 1848. In 1851 a second edition appeared, with numerous additions. In the same year this second edition was re-published in this country, edited by Dr. Kerr. There have been no additions made to the work since that time.

Sorgho and Imphee, the Chinese and African Sugar Canes: A treatise upon their origin, varieties and culture; their value as a forage crop; and the manufacture of sugar, syrup, alcohol, wines, beer, cider, vinegar, starch and dye-stuffs; with a paper by Leonard Wray, Esq., of Caffraria, and a description of his patented process for chrystallizing the juice of the Imphee. To which are added copious translations of valuable French pamphlets. By Henry S. Olcott. Fully illustrated with drawings of the best machinery. New York: A. O. Moore, Agricultural Book Publisher, 140 Fulton street. 1857.

The contents of this work are fully set forth in the above title page. It will prove valuable to all interested in the culture of the Chinese sugar cane. It will be sent, postage paid, to any address, for $1.00.

The American Farmer's Encyclopedia: Embracing all the recent discoveries in Agricultural Chemistry, and the use of Mineral, Vegetable and Animal Manures, with descriptions and figures of American Insects injurious to vegetation. Being a complete guide for the cultivation of every variety of Garden and Field Crops. Illustrated by numerous engravings of Grasses, Grains, Animals, Implements, Insects, &c. By Gouverneur Emerson, of Philadelphia, upon the basis of Johnson's Farmer's Encyclopedia. New York: A. O. Moore, Agricultural Book Publisher. 1858.

This is the only Farmer's Encyclopedia published in this country. It is in many respects an able and valuable work, and one which we have frequently commended. When we received this work from the enterprising publisher, we were in hopes that it was a revised edition. But this is not the case. It has not been in any way altered since it was first published in 1843. Still, it is a useful publication, and worthy of a place in every farmer's library; though it would be much better if it contained "all the recent discoveries in Agricultural Chemistry."

Inquiries and Answers.

"How Much Manure is Desirable for a Garden?"—(A. D.) We cannot answer this question definitely. For nearly all vegetables except potatoes, it is not easy to make the soil too rich. Five ordinary barrow-fuls of rotted manure to the square rod would be a heavy dressing, but it is not too much, provided it is intimately mixed with the soil a foot deep. For asparagus, strawberries, and other deep-rooted plants, which remain on the same bed for several years, double this quantity may be used with great advantage. The soil should be trenched two feet deep, and the lower spit mixed with as much manure as can be dug in. Subsoil manuring for such plants is very beneficial.

Buckwheat Straw as a Manure.—In answer to W. L., in the July number, I would say that I have tried buckwheat straw, and think it as valuable as any other straw, if not more so, as a manure. Let it be spread early in the spring on the meadow, and the beneficial effects are quite palpable; but much more so if used for litter,—its absorbing properties retaining the liquid, &c. J. F.—*Liberty, Tioga Co., Pa.*

Ringbone.—The knife in the hand of a skilful operator, when taken in time, is the best remedy, and no risk further than in altering a colt. It is done by opening the skin above the hoof and tying it back; then pass the knife betwixt the object and the bone. Why not try the recipe copied from the London *Field*, in the July number, page 228, and let us know the result through the *Farmer*? J. F.—*Liberty, Tioga Co., Pa.*

White Marl.—(O. L. Barr, Milford, Ind.) If the white marl is composed principally of carbonate of lime, as from your description we should judge to be the case, it would be better to burn it, and thus convert it into quick lime. It is quite probable, however, that it will have a good effect in its natural state, applied in large quantities.

Agricultural School.—(G. A. G., Eminence, Ky.) We believe the only Agricultural School in this State is that kept by Messrs. Olcott & Vail, at Mount Vernon, Westchester Co., N. Y. You will obtain full information by addressing them.

HEAVEY HORSES.—Do not keep this kind of stock, believing as I do, that prevention is better than cure. Attention in haying, grooming and driving, and we shall hear no more of heavey horses. Smart weed administered as follows is said to effect a cure:—Steep the weed in boiling water; give the horse one quart of the liquid every day for eight or ten days, giving grain or cut feed, wet. J. F.—*Liberty, Tioga Co., Pa.*

TO DESTROY CANADA THISTLES.—In reply to your correspondent "S.," I would say, keep the thistles from going to seed this fall, if possible. Then, next summer, mow them close in July, before they go to seed; then, in a few weeks, put a little salt right upon the crown or tip of each sprout, when the stalk will wilt and the root die. W. L. M.—*Yorktown, N. Y.*

ADVERTISEMENTS,

To secure insertion in the FARMER, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to farmers. TERMS—Two Dollars for every hundred words, each insertion, PAID IN ADVANCE.

WILEY & HALSTED,
351 BROADWAY,.....NEW YORK,
Have now ready

DOWNING'S FRUITS AND FRUIT TREES OF AMERICA,

THOROUGHLY REVISED, with very large additions, especially in Apples and Pears, with many new cuts of new fruits. Edited by CHARLES DOWNING, Esq., brother of the late A. J. Downing. 1 vol., 12mo., containing 750 pages. Cloth, $1 50.

The reputation of Mr. Charles Downing as a Horticulturist, in connection with the general popularity of this work, leads us to anticipate a large and immediate sale for this edition.

Orders from the Trade and Dealers in Agricultural Works are solicited, and will be attended to with promptitude. No copies will be forwarded without orders.

NOTICES OF FORMER EDITIONS.

"Nothing compared with it on the subject of Pomology has yet been published in the United States. Unquestionably the standard pomological work of this country."—*Amer. Agriculturist.*

"A deliberate examination of the work enables us to say, without hesitation, that it is by far the greatest acquisition placed within the reach of American cultivators of fruit which has ever appeared."—*Cultivator.*

*** Copies will be mailed to any address, and prepaid, on the receipt of the price.

CLUBS AND SOCIETIES will be supplied with the work for Premiums, at a discount. October 1.—1t.

THE MASSACHUSETTS WHITE.

THIS NEW EARLY AMERICAN GRAPE, with long, oval, white berries, is sufficiently early to ripen its crop fully in New England, and in all the Northern and Western States, being in eating with the Concord, or several weeks earlier than the Diana or Isabella. Its unmixed native origin, its *unequaled hardiness*, and its *extraordinary beauty of color and form*, render the *Massachusetts White* the most desirable Grape in cultivation for the *Private Garden*, or for the *Vineyard*.

Plants of the Rebecca, Delaware, Clara, Wyman, Union Village, Canadian Chief, Raabe, Brinckle, Emily, Perkins, Graham, Concord and Diana, and other new Grapes, are now ready, at the lowest rates.

A full descriptive priced Catalogue of the above new Grapes, and of all Plants and Trees required for the Nursery, Greenhouse, Vinery, Garden, Lawn or Orchard, will be sent on application.

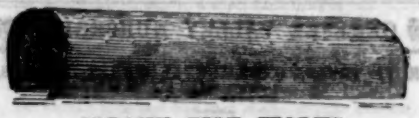
Carriage of all packages paid to New York and Boston.

B. M. WATSON,
Oct. 1, 1857.—8t. Old Colony Nurseries, Plymouth, Mass.

YOUNG MEN, FORM A BOOK CLUB

FOR YOUR TOWN. Get twenty or thirty gents and ladies, and, by a simple organization, you may have a Course of Lectures, and also have all the popular Books of the day for circulation in the Club, at little or no expense to each member. By-Laws, and full printed directions for forming Book Clubs, will be sent to any address, on application by mail, enclosing a stamp. Address

D. M. DEWEY,
October 1.—2t. Rochester, N. Y.



ALBANY TILE WORKS,

Corner of Patroon and Knox Streets, Albany, N. Y.

THE subscribers, being the most extensive manufacturers of Draining Tile in the United States, have on hand, in large or small quantities for Land Draining, the following descriptions, warranted superior to any made in this country, hard burned. On orders for 10,000 or more, a small discount will be made.

HORSE-SHOE TILE CUT 14 INCHES LONG—PIECES.

2½ inches rise,	$12	per 1000
3½ " "	15	"
4½ " "	28	"
5½ " "	40	"
6½ " "	60	"
8 " "	80	"

SOLE TILE CUT 14 INCHES LONG—PIECES.

2 inches rise,	$12	per 1000
3 " "	18	"
4 " "	40	"
5 " "	60	"
6 " "	80	"

Also on hand, 6-inch calibre Octagon Pipe, $20 per 100, and 8-inch calibre Round Pipe, $30 per 100, for large drains. Cornice Brick, of the pattern used in the city of Washington, also on hand. Orders solicited. Cartage free. C. & W. M'CAMMON,

(Late BABCOCK & VAN VECHTEN,)
Albany, N. Y.

RICH'D H. PEASE, Agent,
Excelsior Ag. Works, Warehouse and Seed Store,
October 1.—2t. 359 and 371 Broadway, Albany, N. Y.

FRUIT TREES AND FRUIT.

THE subscriber being extensively engaged in the Nursery business, and having planted over 100 acres of Orchard, embracing more than 10,000 Trees, enabling him to test and compare varieties and propagate only those of real value, is prepared to furnish Trees in large quantity, at prices heretofore unknown to the Tree trade.

The present stock embraces about 300,000 Apple Trees, of various sizes among which is an abundant supply of Baldwins and Greenings. 15,000 Cherry Trees, one and two years old, 4 to 12 feet. 20,000 Peach Trees, of best market sorts. 40,000 two years old, and 100,000 one year old, Dwarf Pear Trees of very superior quality; the former are believed to *be the best* lot in the United States, and warranted *equal* to the best.

Also, a general assortment of other Fruit and Ornamental Trees and Plants, at low prices.

Persons visiting the grounds before October, can see several hundred Dwarf Pear Trees in full bearing; and any who doubt their success for orchard culture, are especially invited to examine them. T. G. YEOMANS,

October 1.—1t. Walworth, Wayne Co., N. Y.

MORGAN HORSE FOR SALE.

GENERAL GIFFORD, Jr. This beautiful Horse is three years old past. Color, chestnut, with no marks. Is 15½ hands, and weighs over 1,000 lbs. Is thought by good judges to be in no way inferior, and in many respects superior, to his splendid sire, General Gifford. For pedigree, see cut. For further particulars, address ELIAB YEOMANS,

October 1.—1t* Walworth, Wayne Co., N. Y.

NEW ROCHELLE BLACKBERRY.

☞ GENUINE. ☜

25 CENTS each, $2 50 per dozen, $16 per hundred, with discount to the trade. Also, Fruit and Ornamental Trees, Stocks, &c. &c. Address J. C. TEAS,

October 1.—1t* Raysville, Ind.

IMPORTANT NOTICE TO NURSERYMEN.

QUINCE STOCKS FOR SALE.

WE have on hand a large stock of the best Angers and Paris or Fontenay Quince Stocks, raised by ourselves from Stocks and from Cuttings, both of which we will sell on more reasonable terms than they can be imported. Early orders are solicited.

H. E. HOOKER & CO.,
July 1.—4t. Commercial Nurseries, Rochester, N. Y.

QUINCE AND APPLE STOCKS FOR SALE.

THE subscribers offer for sale, of their own raising,
100,000 Quince Stocks (Angers and Fontenay) at $15 per 1000.
200,000 Apple Seedlings, at $5 "
10,000 Peach Trees,
Lockport, N. Y., Sept.—2t* PENFIELD, BURRELL & CO.

GENESEE VALLEY NURSERIES.

FRUIT TREES, ORNAMENTAL TREES, SHRUBS, ROSES, &c. &c.

THE Proprietors of these well-known Nurseries have on hand a large and well-grown stock of

FRUIT TREES, ORNAMENTAL TREES, SHRUBS, ROSES, GREEN-HOUSE AND BEDDING PLANTS, DAHLIAS, PHLOXES AND OTHER HARDY BORDER PLANTS.

The assortment of ROSES is very extensive, and embraces all varieties which could be obtained, and which are considered worthy of cultivation. Our collection of HYBRID PERPETUALS is the most complete in the country.

The GREEN-HOUSE DEPARTMENT receives particular attention, and the stock of Fuchsias, Geraniums, and other Green-house Plants, is large and varied. In the

FRUIT DEPARTMENT,

OUR STOCK CONSISTS OF

APPLES, of the leading varieties, Dwarf and Standard.
PEARS, of all desirable varieties, on Quince and Pear Stocks.
PLUMS—A choice selection of well grown trees, of popular sorts.
CHERRIES—All the popular sorts, Dwarf and Standard.
PEACHES—A choice assortment.
NECTARINES, APRICOTS and QUINCES, in variety.
GRAPES—A complete assortment of both Native and Foreign sorts, including many of recent introduction.

SMALL FRUITS.

CURRANTS—Twenty-five choice sorts, including many new varieties.
RASPBERRIES, GOOSEBERRIES, BLACKBERRIES and STRAWBERRIES, of all new and approved varieties.

We have, for the accommodation of NURSERYMEN, STOCKS and SEEDLINGS, including APPLE, PEAR, PLUM, CHERRY, QUINCE, &c. &c. Also, SEEDLINGS OF EVERGREEN TREES, including Norway Spruce, Balsam Fir, Scotch Pine, Austrian Pine, Larch and Hedge Plants.

ORNAMENTAL DEPARTMENT.

The stock of Ornamental Trees and Shrubs, both Deciduous and Evergreen, will be found to embrace all that is desirable among LAWN and STREET TREES and SHRUBS.

ROSES—Consisting of Hybrid Perpetual and Summer Roses, Moss, Bourbon, Noisette, Tea, Bengal or China, and Climbing or Prairie Roses.

HARDY HERBACEOUS or BORDER PLANTS, and BULBOUS FLOWER ROOTS—An extensive assortment.

All the above will be disposed of at low rates, and on advantageous terms. For further details, we refer to our full set of Catalogues, which will be mailed to applicants who enclose a one cent stamp for each.

No. 1. Descriptive Catalogue of Fruits, &c.
No. 2. Descriptive Catalogue of Ornamental Trees, Shrubs, Roses, &c.
No. 3. Descriptive Catalogue of Green-house and Bedding Plants, Dahlias, &c.
No. 4. Wholesale or Trade List for Nurserymen and Dealers.

☞ Amateurs and others interested in Horticulture, are respectfully invited to visit our Show Grounds and Green houses, at 183 South Sophia street, a short distance from the central part of the city.

☞ All communications to be addressed to

A. FROST & CO.,
Sept. 1.—3t. Genesee Valley Nurseries, Rochester, N. Y.

J. DONNELLAN & CO.,
OF THE
ROCHESTER AND LAKE AVENUE COMMERCIAL NURSERIES,
ROCHESTER, N. Y.,

WISH to inform their friends and customers that they have on hand for Fall Sales the following select assortment of

Standard and Dwarf Fruit Trees,						
Evergreen and Weeping	"					
Ornamental Deciduous and Climbing Shrubs,						
A numerous variety of select French and Domestic Roses, Paeonies, Phloxes, &c. &c.,						
Hardy Herbaceous and Hedge Plants,						
Bulbous Roots, Double Dahlias, &c., &c.,						

which they will sell in quantities to suit purchasers, and on moderate terms.

100,000	3 and 4	year old	Apple Trees, choicest kinds,			
140,000	2	"	"	"	"	
130,000	1	"	"	"	"	
10,000	2	"	Peach	"	"	
10,000	1	"	"	"	"	

with an equal quantity of Pears Plums, Cherries, &c.

We have also 100,000 Manetta Stocks for Roses, first quality.
50,000 extra 2 year old Apple Stocks.
40,000 " Mazzard Cherry "
5,000 1 and 2 year old Horse Chestnut Seedlings.

☞ Descriptive and Price Catalogues furnished gratis.
Rochester and Lake Avenue Com'l Nurseries, Sept. 1, 1857.—2t.

HYACINTHS, TULIPS, DOUBLE DAHLIAS, &c.

THE subscribers offer this season a more extensive assortment than usual of DUTCH BULBOUS ROOTS, imported from the best Flower Nurseries of Europe, in the finest condition, and all first class bulbs—embracing every desirable variety of

DOUBLE AND SINGLE HYACINTHS, adapted for house or out-door flowering,
EARLY AND LATE, DOUBLE AND SINGLE TULIPS, of every shade and hue,
POLYANTHUS NARCISSUS,
ROMAN NARCISSUS, for early winter blooming,
SINGLE NARCISSUS,
DOUBLE AND SINGLE JONQUILLES,
CROCUS of all sorts, including some very fine new-named seedling varieties,
CROWN IMPERIALS,
FRITILLARIAS,
GLADIOLUS,
IRIS,
IXIAS,
LILIES,
ARUMS,
COLCHICUMS,

with numerous other *sorts* of approved tested value.

CATALOGUES of the above, with descriptions and directions for planting and managing, will be mailed to applicants enclosing a stamp.

HYACINTH GLASSES, FANCY CROCUS POTS, &c.

J. M. THORBURN & CO., SEEDSMEN, &c.,
September 1.—2t. 15 John street, New York.

BUFFALO NURSERIES
AND
OAKLAND'S GARDENS AND GREENHOUSES.

THE subscribers offer for sale, the ensuing autumn and spring, a large and fine stock of—

FRUIT TREES.

EMBRACING

Apple,	Plum,	Nectarins,
Pear,	Cherry,	Quince,
Peach,	Apricot,	&c., &c.

—ALSO—

Apple, Cherry, and Quince Stocks. Strawberries, Gooseberries, Raspberries and Currants.

The Ornamental Department is full and extensive, including a superb stock of Evergreens and Roses.

☞ Special attention is called to the Pear trees, both standard and Dwarf, as we have a large and unusually fine stock.

Catalogues will be sent to persons requesting them.

Office on Ferry street, Buffalo, N. Y.
Sept.—3t. MANLEY & MASON.

NEW ROCHELLE (OR LAWTON) BLACKBERRY.

PLANTS FOR SALE AT

TWO DOLLARS AND A HALF PER DOZEN,
SIXTEEN DOLLARS PER HUNDRED,
ONE HUNDRED AND FIFTY DOLLARS PER THOUSAND.

C. P. BISSELL, Rochester, N. Y.,
East Avenue, near H. E. Hooker & Co.'s Com'l Nurseries.
August 1.—3t.

MOUNT HOPE AVENUE, ROCHESTER, N. Y.

THE PROPRIETOR offers for sale this fall and coming spring a large assortment of Fruit and Ornamental Trees, such as Apple, Dwarf Pear, Cherry, Peach, Plum, Apricot, Gooseberries, Currants, Raspberries, Grape Vines, Quince, Cherry and Plum Stocks, Rhubarb, Asparagus, &c. Shade Trees, Evergreens, Flowering Shrubs, Roses, Vines, Dahlia Roots, Bulbous Roots, Green-house Plants. Address WILLIAM KING,
September 1.—2t. Rochester, N. Y.

I HAVE for sale Fifteen Hundred large, well-grown, Peach Trees, of superior sorts.

—ALSO—

Two Thousand Grape vines, from one to four years old. Currant Bushes, Gooseberry Bushes—Roses and Rose Stocks.

The above will be sold cheap for cash—packed and sent according to order. JAMES LENNON,
No. 12, Gorham st.
October 1.—1t* Rochester, N. Y.

TO PLANTERS AND DEALERS IN TREES.

THE subscriber would inform his friends that his Descriptive and Wholesale Priced Catalogue of Fruit and Ornamental Trees, for the autumn of 1857, will be sent, after the 10th of August, to all applicants who enclose a stamp. Address

ISAAC PULLEN,
September 1.—2t. Hightstown, Mercer Co., N. J.

BOOKS FOR THE FARMERS!

FURNISHED BY THE PROPRIETOR OF GENESEE FARMER

The Farm Engineer. By Ritchie. Price $3.
Gunn's Domestic Medicine. Price $3.
The Cow, Dairy Husbandry, and Cattle Breeding. Price 25 cts.
Every Lady her own Flower Gardener. Price 25 cents.
The American Rose Culturer. Price 25 cents.
Prize Essay on Manures. By S. L. Dana. Price 25 cents.
The Pests of the Farm, with directions for extirpation. Price 25 cents.
Horses—their Varieties, Breeding, Management, &c. Price 25 cents.
The Hive and Honey Bee—their Diseases and Remedies. Price 25 cents.
The Hog—its Diseases and Management. Price 25 cents.
The American Bird Fancier—Breeding, Raising, &c. 25 cts.
Domestic Fowls and Ornamental Poultry. Price 25 cents.
Chemistry made Easy for the Use of Farmers. Price 25 cts.
The American Poultry Yard. Price $1.
The American Field Book of Manures. Embracing all the Fertilizers known, with directions for use. By Browne. $1.25.
Buist's Kitchen Gardener. Price 75 cents.
Stockhart's Chemical Field Lectures. Price $1.
Wilson on the Cultivation of Flax. Price 25 cents.
The Farmer's Cyclopedia. By Blake. Price $1.25.
Allen's Rural Architecture. Price $1.25.
Puel's Bee Keeper's Chart. Illustrated. Price 25 cents.
Johnston's Agricultural Chemistry. Price $1.25.
Johnston's Elements of Agricultural Chemistry and Geology. Price $1.
Randall's Sheep Husbandry. Price $1.25.
Miner's American Bee-Keeper's Manual. Price $1.
Fessenden's Complete Farmer and Gardener. 1 vol. Price $1.25.
Allen's Treatise on the Culture of the Grape. Price $1.
Youatt on the Breeds and Management of Sheep. Price 75 cts
Youatt on the Hog. Complete. Price 50 cents.
Youatt and Martin on Cattle. By Stevens. Price $1.25.
The Shepherd's own Book. Edited by Youatt, Skinner and Randall. Price $2.
Allen's American Farm Book. Price $1.
The American Florist's Guide. Price 75 cents.
The Cottage and Farm Bee-Keeper. Price 50 cents.
Country Dwellings; or the American Architect. Price $6.
Nash's Progressive Farmer. A book for every boy in the country. Price 50 cents.
Beattie's Southern Agriculture. Price $1.
Smith's Landscape Gardening. Containing hints on arranging Parks, Pleasure Grounds, &c. Edited by Lewis F. Allen. Price $1.25.
The American Fruit Grower's Guide in Orchard and Garden. Price $1 25.
Thomas' Farm Implements. Price $1.
Beecher's Domestic Receipt Book. Price 75 cents.
" " Economy. Price 75 cents.
Bement's American Poulterers' Companion. Price $1.25.
The Chinese Sugar Cane and Sugar Making. Price 25 cents.
Linsley's Morgan Horses. Price $1.
Liebig's Animal Chemistry. Price 25 cents.
Mysteries of Bee-keeping Explained. Price $1.
Reemelin's Vine Dressers' Manual. Price 50 cents.
Chorlton's Grape Growers' Guide. Price 60 cents.
Miner's American Poultry Book. Price 50 cents.
Guenon's Treatise on Milch Cows. Price 38 cents.
The Ladies' Guide, or Skillful Housewife. Price 25 cents.
Leibig's Familiar Letters on Chemistry. Price 12½ cents.
Skinner's Elements of Agriculture. Price 25 cents.
The Horse's Foot, and How to Keep it Sound. Price 25 cents.
Johnson's Catechism of Agricultural Chemistry and Geology. Price 25 cents.
Genesee Farmer for 1856. Bound in paper, 75 cents; in half calf, $1.
Thaer's Principles of Agriculture. Price $2.
Downing's Landscape Gardening and Rural Architecture. Price $3 50
Cobbett's American Gardener. Price 50 cents.
Breck's Flower Garden. Price $1.
Cranberry Culture. Price 50 cents.
Pardee on Strawberry Culture. Price 60 cents.
Chorlton's Exotic Grapes. Price 50 cents.
Warring's Elements of Agriculture. Price 75 cents.
Cole's American Fruit Book. Price 50 cents.
Cole's Diseases of Animals. Price 50 cents.
Schenck's Gardener's Text Book. Price 50 cents.
The Farmer's Land Measurer. Price 50 cents.
Rodger's Scientific Agriculture. Price 75 cents.
Dana's Muck Manual. Price $1.
How to Build and Ventilate Hot-houses, Graperies, &c. Price $1.25.
Thompson on the Food of Animals. Price 75 cents.
Stewart's Stable Book. Price $1.00.
Dadd's Anatomy and Physiology of the Horse. Price $2.
Youatt on the Horse. Price $1.25.
Norton's Scientific Agriculture. Price 60 cents.
Bridgeman's Young Gardener's Assistant. Price $1.50.
Bridgeman's Kitchen Gardener's Instructor. Price 50 cents.
Bridgeman's Fruit Cultivator's Manual. Price 50 cents.
Bridgeman's Florist's Guide (an excellent work). Price 50 cents.
New Process for the Culture of the Vine. Price 25 cents.
Leibig's Reply to Lawes. Price 25 cents.
Leibig's Researches on the Motion of the Juices in the Animal Body, and Effect of Evaporation of Plants Price 25 cents.
Rural Annual and Horticultural Directory. Price 25 cents. Do. in cloth, 50 cents.

The above will be sent free upon receipt of price annexed.

NEW WORK! NOW IN PRESS!

SORGHO AND IMPHEE,

THE CHINESE AND AFRICAN SUGAR CANES

A COMPLETE Treatise upon their Origin, Varieties, Culture and Uses; their value as a Forage Crop, and directions for making Sugar, Molasses, Alcohol, Sparkling and Still Wines, Beer, Cider, Vinegar, Paper, Starch and Dye-Stuffs.

FULLY ILLUSTRATED WITH DRAWINGS OF APPROVED MACHINERY; with an Appendix by Leonard Wray, of Caffraria, and a description of his patented process for crystallizing the juice of the Imphee; with the latest American experiments, including those of 1857 in the South. By

HENRY S. OLCOTT.

To which are added translations of valuable French pamphlets received from the Hon. John Y. Mason, American Minister at Paris.

PRICE ONE DOLLAR.

Sent by mail, post-paid. Orders taken immediately. Those first received will be first filled.

C. M. SAXTON & CO.,
Agricultural Book Publishers,
August 1.—3t. 140 Fulton street, New York.

New Hand-Books for Home Improvement, by Mail.

HOW TO BEHAVE.—A NEW POCKET MANUAL OF ETIQUETTE.

AT HOME,	AT PLACES OF AMUSEMENT,
ON THE STREET,	AT WEDDINGS,
IN COMPANY,	AT CHURCH,
AT TABLE,	WHILE TRAVELING,
AT PICNICS,	IN COURTSHIP, ETC.

HOW TO BEHAVE, the third number of our "HAND-BOOK FOR HOME IMPROVEMENT,"—now ready—is a complete guide to Correct Personal Habits, embracing the principles of good manners; useful hints on the care of the person, eating, drinking, exercise, dress, self-culture, and behavior at home; the etiquette of salutations, introductions, receptions, visits, dinners, evening parties, conversation, letters, presents, weddings, etc, with illustrative anecdotes, a chapter on love and courtship, and rules of order for debating societies. Price, prepaid by mail, 30 cts.; muslin, 50 cts. Address FOWLER & WELLS, 308 Broadway, N. Y.

"How to Write," "How to Talk," "How to Behave," and "How to do Business," now ready—same size and price. The four works sent by mail for $1. September 1.—2t.

HICKOK'S
KEYSTONE CIDER MILL,

MANUFACTURED BY THE

EAGLE WORKS, HARRISBURG, PA.

THIS sterling machine has within the past year been put to severe actual tests, and been very much improved by the addition of a 22 inch fly-wheel, new gearing, joint-bolts, and other minor improvements, and is now offered to the public with the certainty that it is made in the very best manner, and that it will grind and press easier and faster than any other Mill in the market. Dealers and others supplied on liberal terms. Address

W. O. HICKOK,
September 1.—3t. Agent Eagle Works, Harrisburg, Pa.

GRAPE VINES.

Concord.....$1 each; $10 per doz.; $75 per 100.
Diana.....$1 each; $10 per doz.; $75 per 100.
Northern Muscaline.$1 each; $10 per doz.; $75 per 100.
Rebecca.....$3 each.
Delaware.....$3 each.
Child's Superb, $5 each.

Carefully packed and sent to any part of the United States or Canadas, on receipt of cost.

Address, JOSIAH SALTER.
Sept.—2t. Rochester, N. Y.

TO SEEDSMEN, PLANTERS, &c.

THORBURN'S PRELIMINARY WHOLESALE PRICED LIST of

VEGETABLE AND AGRICULTURAL SEEDS,
DUTCH BULBOUS ROOTS, DOUBLE DAHLIAS, &c.,

for the fall of 1857, is just published, and will be mailed to dealers and others requiring seeds in quantities, enclosing a stamp for return postage.

This year's seeds, so far as harvested, are of prime quality, generally abundant, and prices correspondingly moderate.

J. M. THORBURN & CO., SEEDSMEN, &c.,
September 1.—3t. 15 John st., New York.

Prices of Agricultural Products at the Principal Markets in the United States, Canada and England.

	NEW YORK, Sept. 26d.	PHILADELP'IA, Sept. 19th.	ROCHESTER, Sept. 17th.	CHICAGO, Sept. 17th.	TORONTO, Sept. 20th.	LONDON, ENG., Sept. 7th.
Beef, per 100 lbs.,			$5.75 @ $6.00		$5.50 @ $6.50	$8.25 @ $13.00
do mess, per bbl.,	$16.00					
Pork, per 100 lbs.,			8.00 9.00			10 50 15.00
do mess, per bbl.,	20.00 @ $25.75		25.00 28.50			
Lard, per lb.,	.14 .15		.15½			.13 .17
Butter, do	.15 .22		.14 .20	$0.18 @ $0.22	.20 .30	.18 .26
Cheese, do	.08 .09½		.08½ .09¾	.06 .07	.09½ .12	.11 .17
Flour, per bbl.,	5.40 8.00	$5.50 @ $6.00	6.00 7.50	4.25	5.00 6.25	7.20 8.16
Wheat, per bush.,	1.05 1.50	1.18 1.40	1.45 1.50	.80 1.20	.75 1.08	1.29 1.80
Corn, shelled, per bu.,	.80 .85	.74 .75	.87	.52 .55	.85	1.08 1.17
Rye, do	.80 .86	.75		.55 .60	.70 .80	.90 1.14
Oats, do	.34	.35 .38	.38 .40	.26 .30	.50 .55	.60 1.02
Barley, do	.75 .95		.80	.75 .80	.50 .80	1.11 1.35
Clover Seed, do		7.37	6.50 7.00			
Timothy Seed, do		3.10 3.25	2.50 4.50	2.25		1.80 2.07
Flax Seed, do	1.75 1.87					
Hay, per ton,	12.00 16.00		7.00 11.00	6.00 10.00	16.00 20.00	
Wool, per lb.,			.30 .40		.32	
Wood, hard, per cord,			4.50 5.00			

Contents of this Number.

How can we most Economically Increase the Fertility of the Soil? 297
Study the Mechanical Qualities of the Soil, ... 298
Items Suggested by the September Number, ... 299
Notes for the Month, by S. W., ... 299
Good Sheep the Most Profitable, ... 300
"The Manure Question," 301
Butter from Prairie Hay, ... 301
Underdraining, ... 301
Preserving Butter, ... 301
Breaking Prairie Land in the Fall, ... 302
Take Care of Your Tools, Fodder, &c., ... 302
On the Management of Young Stock, ... 303
Plowing in Green Corn for Manure, ... 303
Will Rye Turn to Chess? 303
National Wealth, ... 303
General Gifford, Jr., ... 304
Turnips and Carrots, ... 304
Management of Milch Cows, ... 304
Pumpkins, ... 304

GENESEE FARMER PRIZE ESSAYS.

On the Best Method of Seeding Land to Timothy or Herd's Grass, ... 305
On the Management of Calves, ... 305
On the Management of Barn-yard Fowls, ... 306
On the Cultivation and Management of Tobacco, ... 307
On the Best Means of Escaping Injury from Drouth, ... 308
On the Benefits to be derived from Competition for the Premiums offered for Short Essays by the Genesee Farmer, ... 308
How can Fathers render Farm Life Attractive to their Sons? 309
Why is Farming considered a Degrading Vocation? 310
How much Education, and what kind, do Farmers need? 311
How can Setting Hens be Taught to Forsake the Lazy Habit? 312
Why do so few Farmers Write for Agricultural Papers? 312
On the Propriety of Agricultural Societies offering Premiums to Practical Farmers for the Best Essays on various Agricultural Subjects, ... 313
On the Advantages of Agricultural Schools, ... 313
Is it Desirable to Plant Fruit Trees in the Highway? 313
Should Farmers' Wives be Educated? 314
Is it Proper for Ladies to Assist in the Garden? 314

HORTICULTURAL DEPARTMENT.

Meeting of the Western New York Fruit Growers' Association, 315
The Ortley Apple, ... 318
Horticultural Operations for October, ... 319
Mushroom Culture, ... 320
Cultivation of Onions, ... 320

LADIES' DEPARTMENT.

How Shall we Spend our Winter Evenings? 321
Original Domestic Receipts, ... 321

EDITOR'S TABLE.

Fair of the United States Agricultural Society, ... 322
Potato Rot, ... 322
Will Wheat Turn to Chess? 322
Underdraining Clay Land, ... 322
Carbonic Acid in the Soil, ... 322
Lime and Sulphur for the Curculio, ... 323
A Rose on an Apple Tree, ... 323
Large Currants, ... 323
To Kill Angle Worms, ... 323
To Protect Cucumber Vines from Bugs, ... 323
Prize Essays, ... 323
Book Clubs, ... 323
Hail Storms in England, ... 323
Thick and Thin Seeding, ... 323
Large Hail Stones, ... 323
Notices of New Books, Periodicals, &c., ... 323
Inquiries and Answers, ... 324

ILLUSTRATIONS.

General Gifford, Jr., ... 304
The Ortley Apple, ... 319

GROVER & BAKER'S

FAMILY SEWING MACHINES.

THESE MACHINES are unquestionably the best in the market. No well regulated family can afford to do without a GROVER & BAKER SEWING MACHINE, made expressly for FAMILY SEWING.

Merchants in good standing from abroad visiting New York or Boston, can now secure the sale of Grover & Baker's Sewing Machines in their several localities, with great profit to themselves and advantage to their customers. GROVER & BAKER,
Sewing Machine Co., 495 Broadway, N. Y.
18 Summer street, Boston.
730 Chestnut street, Philadelphia.
87 Fourth street, St. Louis, Mo.
6 West Fourth st., Cincinnati, O.

October 1.—3t.

BLACKBERRY PLANTS BY MAIL.

(FOR SETTING OUT THIS FALL.)

BESIDE my very large Plants to be sent by Express, I have a few New Rochelle (or Lawton) Blackberry Plants of suitable size to be sent by Post, which I will forward, prepaid, to any part of the United States, with full directions as to culture, on receipt of $2 per dozen, or $1 per half dozen. Address

C. P BISSELL,
Rochester, N. Y.

October 1.—1t.

The Practical and Scientific Farmer's Own Paper.

THE GENESEE FARMER,

A MONTHLY JOURNAL OF

AGRICULTURE AND HORTICULTURE,

ILLUSTRATED WITH NUMEROUS ENGRAVINGS OF

Farm Buildings, Animals, Implements, Fruits, &c.

VOLUME XVIII. FOR 1857.

Fifty Cents a Year, in Advance.

Five Copies for $2; Eight Copies for $3; and any larger number at the same rate.

☞ All subscriptions to commence with the year, and the entire volume supplied to all subscribers.

☞ POST-MASTERS, FARMERS, and all friends of improvement are respectfully solicited to obtain and forward subscriptions.

Specimen numbers sent to all applicants.

Subscription money, if properly enclosed, may be sent at the risk of the Publisher. Address

JOSEPH HARRIS,
June, 1857. *Rochester, New York.*